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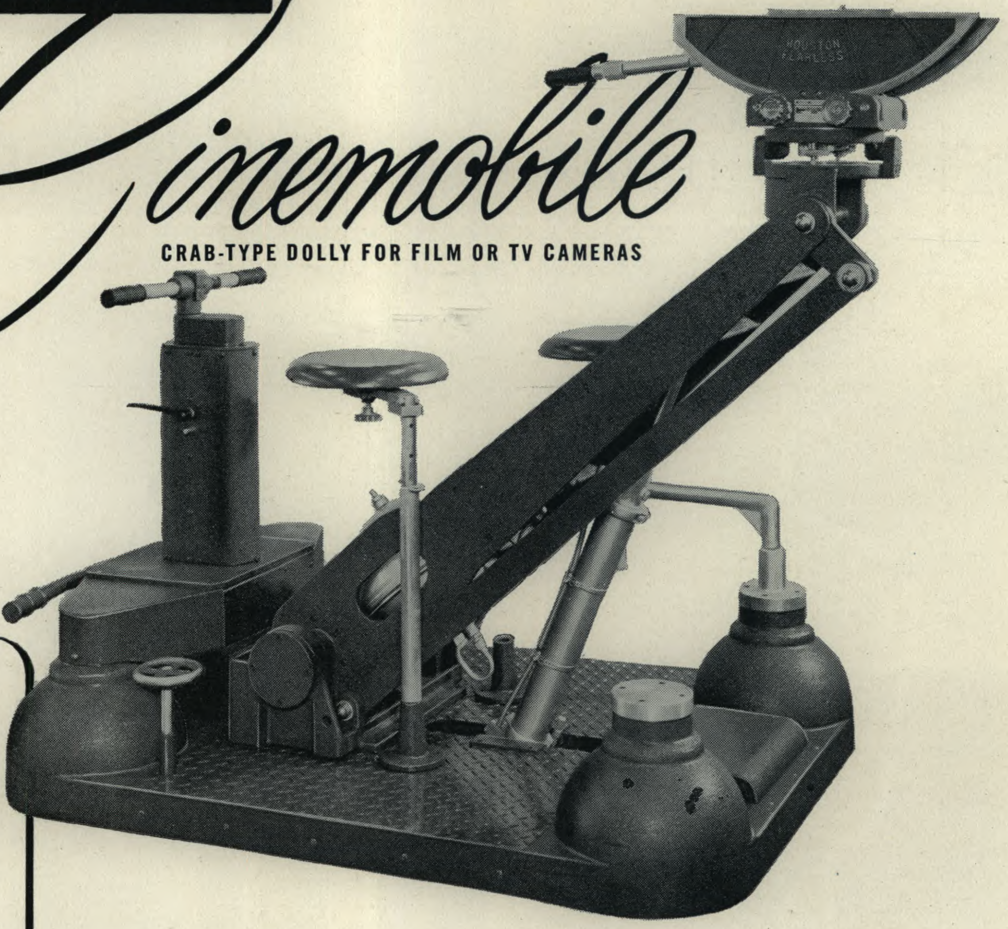

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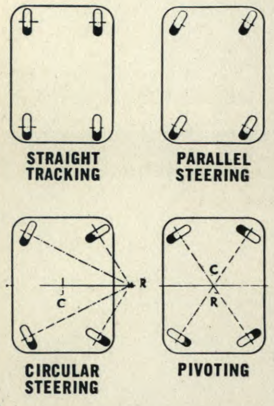

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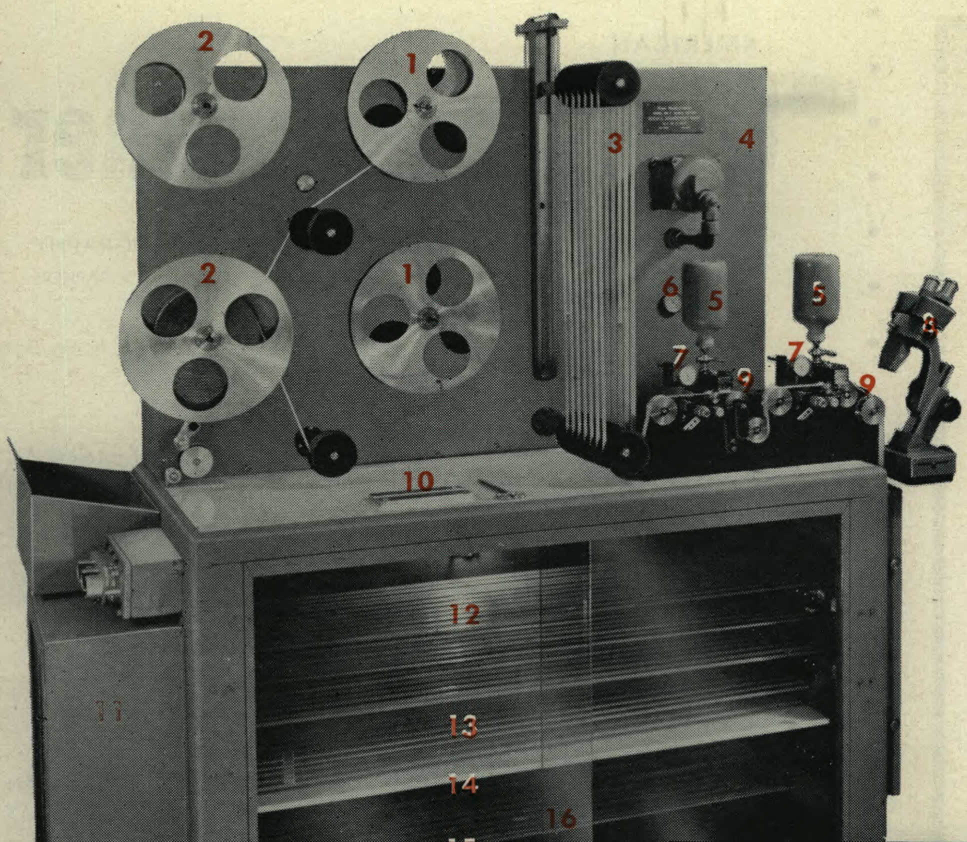

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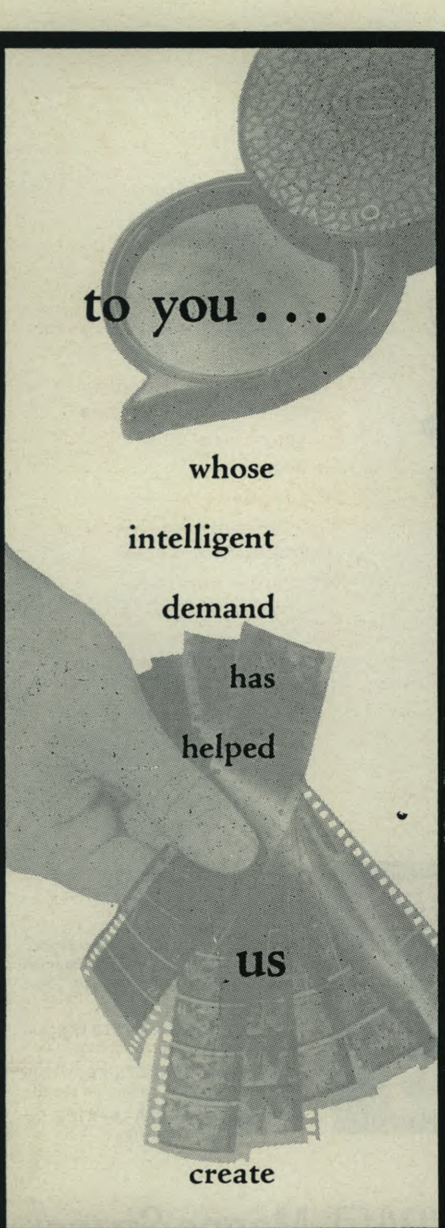

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THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY
PUBLICATION OF THE AMERICAN SOCIETY OF CINEMATOGRAPHERS

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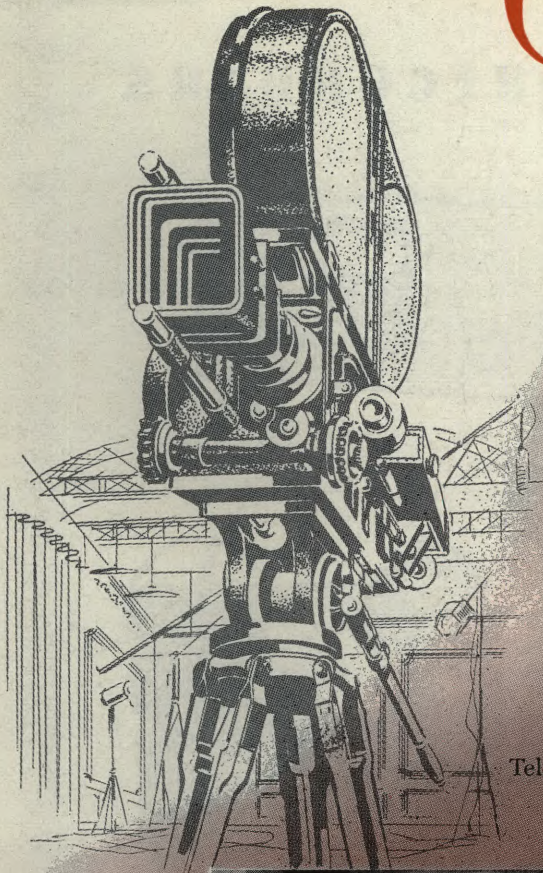

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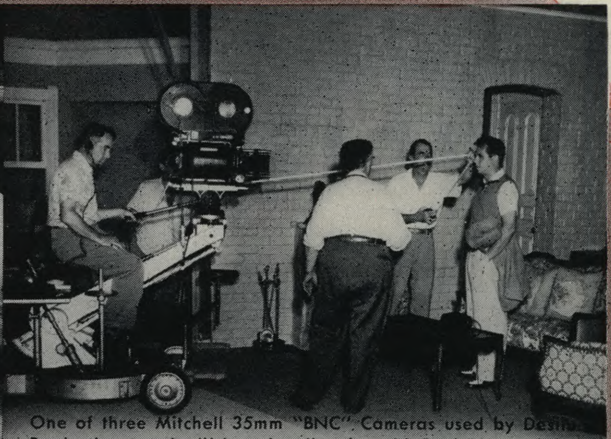
Tom Kelley Studios shoots a TV commercial for North American Airlines with this Mitchell 35 "NC". Ceasar Romero is shown at center.



One of three Mitchell 35mm "BNC" Cameras used by Desilu Productions on the "I Love Lucy" series with Desi Arnaz, right, and Lucille Ball.

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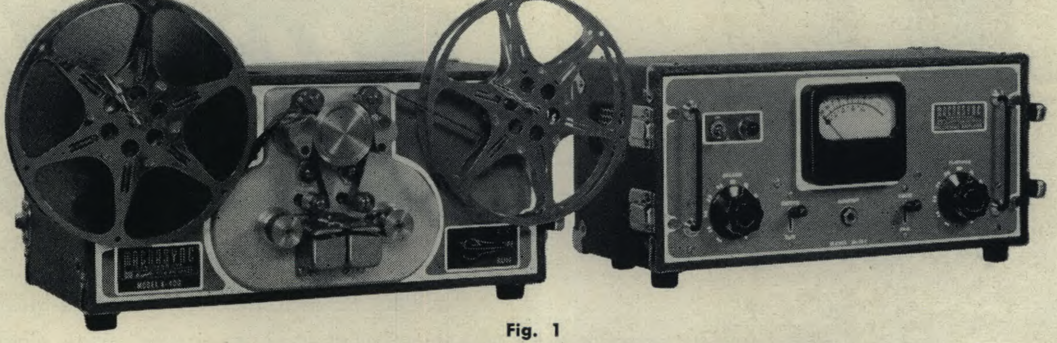

Fig. 1

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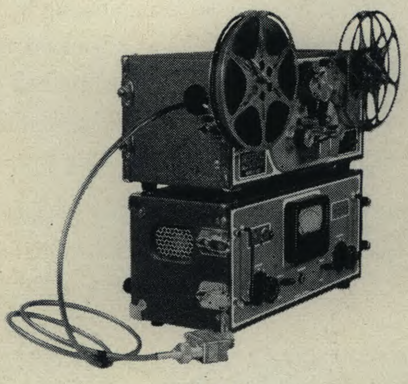

Fig. 2

SIMPLE INTERLOCK WITH CAMERA OR PROJECTOR

The X-400 may be operated in either of the positions illustrated in Figures 1 and 3. Positive projector or camera interlock can be made with the simple flexible-cable gearbox attachment shown above. Extended armature shaft of the synchronous drive motor is accessible through opening in case. This shaft also serves as a convenient "framing knob."

Fig. 4

COMPACT-PORTABLE CASE IS ASSEMBLED AS SHOWN

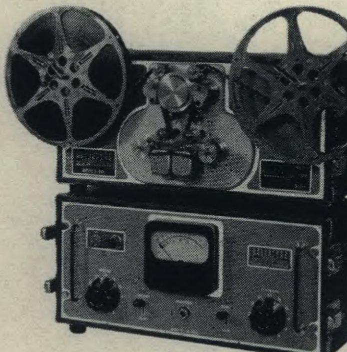

Fig. 3

"2-IN-1" UNITIZED CONSTRUCTION SHOWING MECHANICAL UNIT STACKED ON AMPLIFIER

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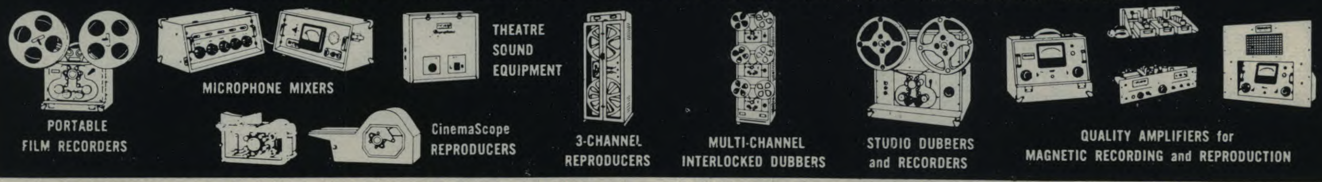
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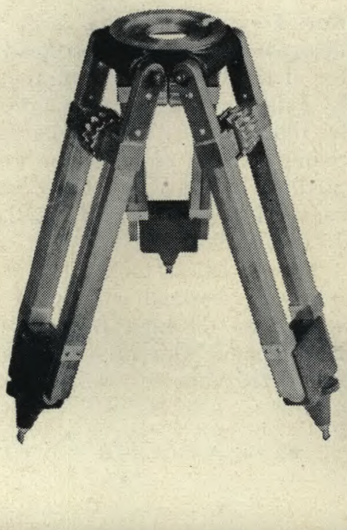

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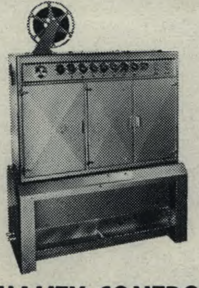

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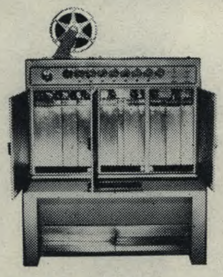

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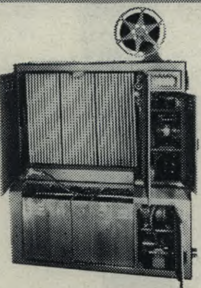

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Hollywood Bulletin Board

In Hollywood last month looking over VistaVision cameras, photographic practices and techniques at Paramount studio were Italian cinematographers Otello Martello and Aldo Tonti, both members of the Associazione Italiana Cineoperatori—the Italian equivalent of the American Society of Cinematographers.

Both cameramen are slated to direct the photography of Ponte de Laurentiis' "War and Peace" in Rome.

★

Three new members were admitted to American Society of Cinematographers last month. They are: Mark P. Gerrine, Pathe Laboratories, associate; John Martin, director of photography; and Gifford S. Chamberlain, Technicolor Motion Picture Corp., associate.

★

Ellis Carter, ASC, directed second unit photography for Republic's "Texas Legionnaire" in Texas last month.

★

William Mellor, ASC, who has been shooting the "Ozzie and Harriet" TV film series, bowed out of the assignment to resume activities in feature film production. First assignment was to direct the photography of "Last Frontier," starring Victor Mature, for Columbia Pictures.

★

Eric Horvitch, ASC, of Johannesburg, So. Africa, reports that South Africa's most prominent members of the country's motion picture industry have organized the South African Society of Cinematographers.

"The Society is to follow closely the high ideals of the A.S.C.," says Horvitch, "and it is hoped that eventually it may become affiliated with and be recognized by your organization."

★

Karl Freund, ASC, has been elected a delegate by the U. S. National Committee of the Commission Internationale de L' Eclairage (International Commission on Illumination) to represent the United States division on television and motion picture lighting at the Commission's convention in Zurich, Switzerland, June 13 to 22, 1955.

Freund leaves for Zurich next month following seasonal windup of the three TV series—"I Love Lucy," "December Bride," and "Our Miss Brooks"—which he photographs for Desilu Productions.

J. P. J. Chapman, cinematographer of Dorset, England, and for 20 years a subscriber to American Cinematographer magazine, renewed his subscription for the 21st year last month. During his career as cinematographer, Chapman has collected 10 awards for motion picture photography.

★

When the volcano Kapoho erupted in Hawaii last month, Harold K. Miyamoto, of Hawaiian Flms, Ltd., was on the spot with his motion picture camera. Result is a 400-ft. color film, "Rift of Fire," chronicling the event.

★

Charles Rosher, ASC, who recently retired to his tropical estate in Jamaica, reports his set lighting experience stood him in good stead on the occasion of recent visit of England's Princess Margaret. He supervised the lighting for a beach party given at Frenchman's Cove in the Princess' honor.

★

Harry Wild, ASC, has been signed by McCadden Corporation to direct the photography of "The Bob Cummings Show." Hal Mohr, ASC, who formerly photographed the show continues as director of photography of "Life With Father" for the same producer.

★

Albert Wetzel, ASC, celebrates ten consecutive years as cameraman on race track "control" movies this month. Wetzel, who helped Joe Thomas of Telefilm launch the first turf film patrol project at Hollywood Park, is currently shooting films for Joe Hernandez, using anamorphic lenses on 16mm cameras—said to be first application of CinemaScope type of photography to race track movies.

★

Benjamin Kline, ASC, veteran director of photography and one of the pioneers in TV film photography ("Fireside Theatre") recently addressed the cinema class of the University of California at Los Angeles on "Advance of Camera Techniques From the Silent Era to TV."

★

From Leo Guild's column in Hollywood Reporter: "Burns and Allen" cinematographer Phil Tannura was ill yesterday and George sent him flowers with a note, "If these flowers seem out of focus, stay home another day."

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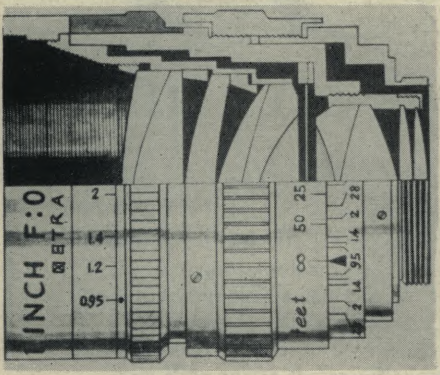

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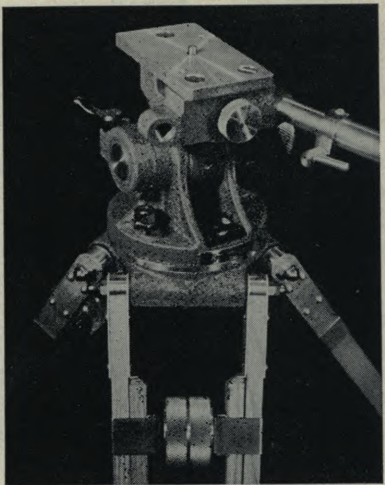

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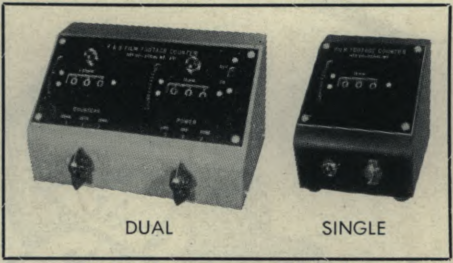

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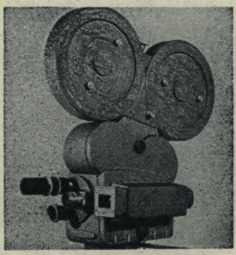

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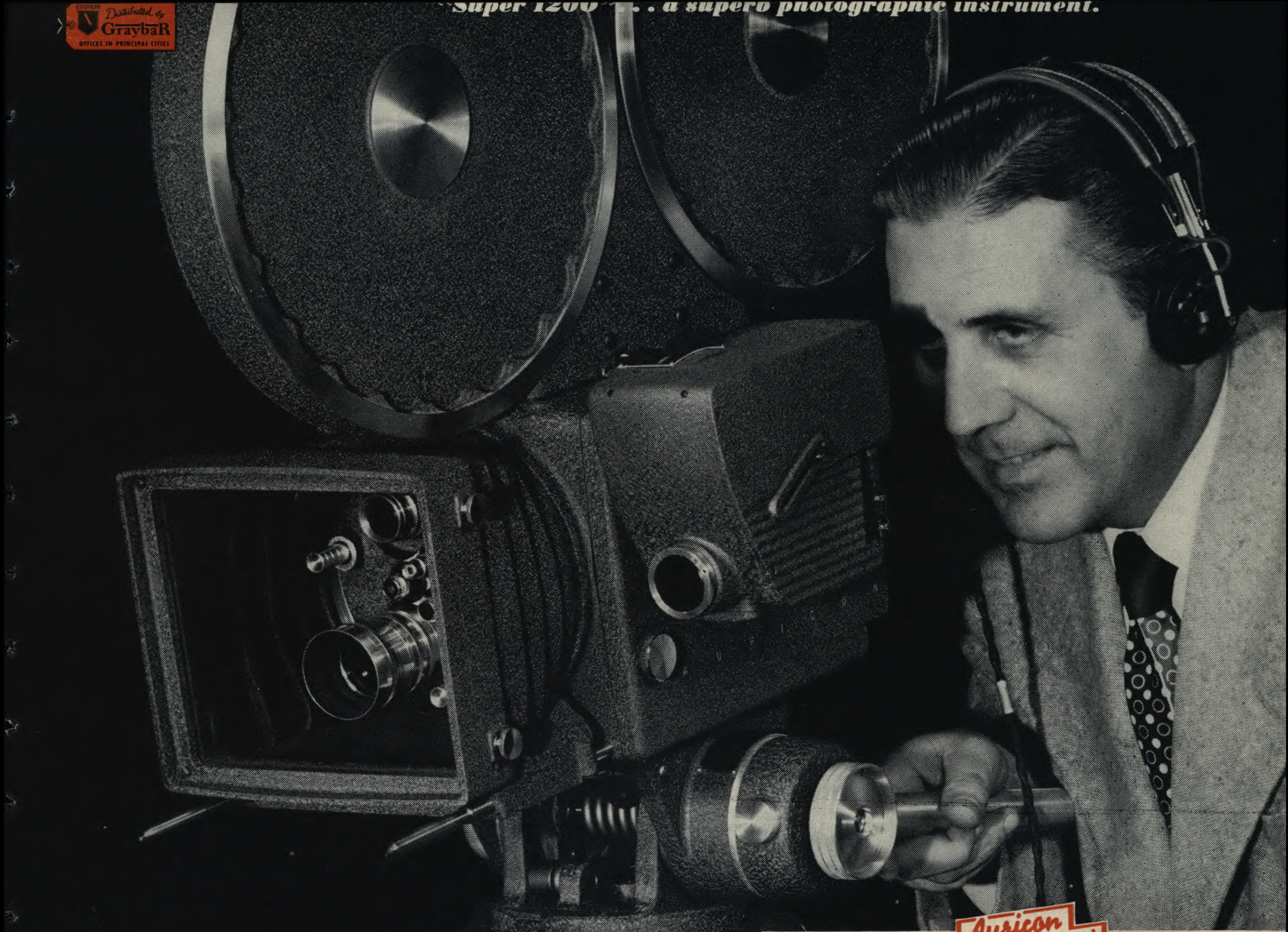

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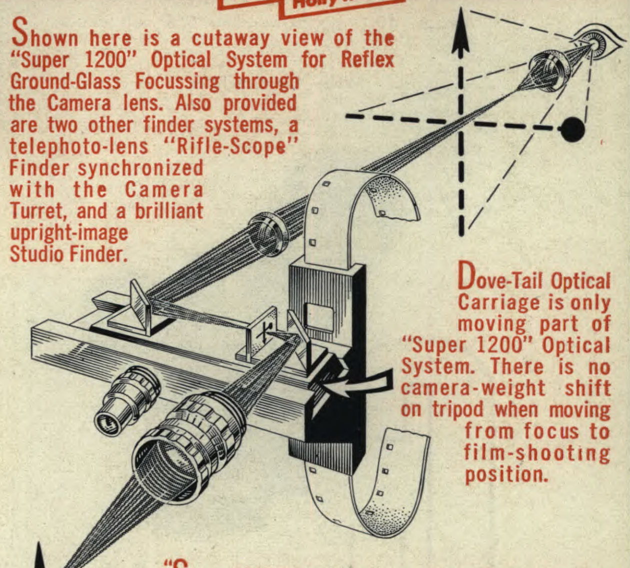
Auricon "Super 1200"

with new Model "CM-74B" features . . .

- ★ During picture exposure, your film runs through the New Auricon "Super 1200" Film-Gate with the light-sensitive film emulsion accurately positioned on jewel-hard Sapphire surfaces, an exclusive Berndt-Bach feature (U.S. Patent No. 2,506,765). This polished Sapphire Film-Gate is guaranteed frictionless and wear-proof for in-focus and scratch-free pictures, regardless of how much film you run through the camera!
- ★ Built-in Electric Camera Heater with automatic Thermostat-Control, provides reliable cold-weather Camera operation.
- ★ Geared Footage & Frame Counter with built-in neon-glow indirect light.
- ★ Two independent Finder systems (in addition to Reflex Ground-Glass Focussing through the Camera lens); a brilliant upright-image Studio Finder, plus a "Rifle-Scope" precision-matched Telephoto Finder.
- ★ Records "rock-steady" picture and High Fidelity Optical Sound-Track on same film at same time, with "whisper-quiet" Camera & Sound Mechanism synchronously driven by precision-machined Nylon gears.
- ★ 400 and 1200 ft. film Magazines available. Up to 33 minutes continuous filming.
- ★ "Super 1200" is self-Blimped for completely quiet studio use.
- ★ Now priced from $4,652.15 complete for sound-on-film; $3,755.65 without sound; choice of "C" Mount lenses and Carrying Cases extra.
- ★ Sold with a 30 day money-back Guarantee and One Year Service Guarantee; you must be satisfied. Write today for your free Auricon Catalog...

Auricon Hollywood



Shown here is a cutaway view of the "Super 1200" Optical System for Reflex Ground-Glass Focussing through the Camera lens. Also provided are two other finder systems, a telephoto-lens "Rifle-Scope" Finder synchronized with the Camera Turret, and a brilliant upright-image Studio Finder.

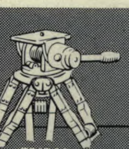
Dove-Tail Optical Carriage is only moving part of "Super 1200" Optical System. There is no camera-weight shift on tripod when moving from focus to film-shooting position.

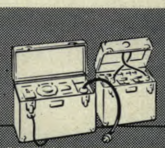
"Super 1200" Camera casing, film gate and shooting lenses are solidly precision-mounted with relation to each other, and do not shift to focus or shoot.

AURICON

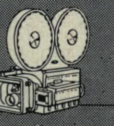
BERNDT-BACH, INC.
6902 Romaine St., Hollywood 38, Calif.

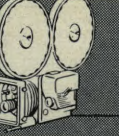
The Auricon Hollywood Line
SOUND-ON-FILM EQUIPMENT SINCE 1931

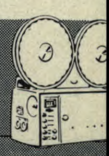

TRIPOD


PORTABLE POWER UNIT

CINE-VOICE


AURICON PRO-600


SUPER 1200


SOUND RECOR

ONE CAMERA

16mm or 35mm
in 10 SECONDS!

Camerette 16/35

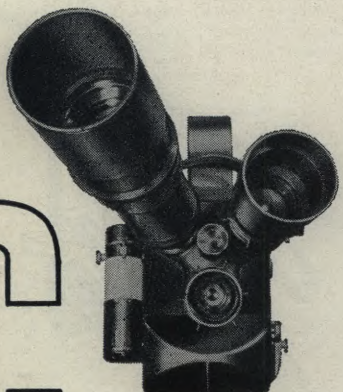
Reflex Motion Picture Camera

The perfect camera for the motion picture film maker working in both 16mm or 35mm color or black and white.

LOOK AT THESE ADVANTAGES—

- The same lenses, same motor drives, same sound blimp and accessory equipment used for both 16mm or 35mm — to convert simply change the magazine.
- Precise rugged movement
- Reflex viewing
- 200 degree adjustable shutter
- Divergent three lens turret
- Automatic film gate 400' magazines 16 or 35mm — the 16mm magazine will accommodate daylight spools as well as standard core load.
- Light weight — only 14 pounds with 3 lenses, 400' magazine, and 6/8 volt motor.

Write for brochure



Camerette

patents coutant-mathot

Manufactured by Ets. Cine. Eclair, Paris

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

INDUSTRY NEWS

A short, inexpensive test film for rapid checking and demonstrating of 16mm projector system performance has been developed by the Society of Motion Picture and Television Engineers, New York, in collaboration with the U. S. Navy. This high-quality "Jiffy" film will prove a boon to 16mm projector manufacturers, audio-visual education organizations, repair shops and camera stores, enabling them to make a simple check or demonstration of projector performance in the four minutes it takes to run 135 feet of film.

Although it requires no test instruments, the Jiffy provides checks for faithful reproduction of wide-range music, picture steadiness, uniform picture brightness, flutter, correct sound track guide adjustment, normal volume, sound focusing in both standard and non-standard emulsion positions, frequency response from 50 to 5000 cycles, and dialogue intelligibility.

★

A nine-minute, 15-year-old color test film is quietly making television history as a reference for TV broadcasters in evaluating color film here and abroad.

Known as "Technicolor TV Test Reel," the film was originally produced in 1940 by Technicolor Motion Picture Corporation, Hollywood, to demonstrate how color motion picture techniques could be applied to product advertising.

Recent field experience with color TV indicates that color films presently available for broadcasting vary widely in color quality.

Initial reprints from the old Technicolor film were made for TV use about two years ago. Since then, the company has delivered a great many prints to TV stations in both 16mm and 35mm sizes for use as a color reference in adjusting and checking out film chains.

★

Completion of closed-circuit television projection facilities at Consolidated Film Industries laboratory in Hollywood, marks the first such installation available to customers of any film processing laboratory in the U. S. The new facility enables film production personnel to see how their TV release prints look on home sets when televised.

Utilization of the new "pre-viewing" method is expected to set higher levels of printing standards and quality control, resulting in superior home reception.

Universal-International, which already has produced several pictures in CinemaScope, will now explore another wide-screen system when it photographs "Away All Boats" in Paramount's VistaVision process. Company has made arrangements to lease VistaVision cameras from Paramount for this production.

★

S.O.S. Cinema Supply Corp., New York, has been granted agency rights for the Vistarama anamorphic system of wide screen photography.

Vistarama, like CinemaScope, employs an anamorphic "squeeze" lens by which images twice the normal width are compressed onto regular 35mm or 16mm negatives.

S.O.S. is providing shop facilities for mounting Vistarama on any type 16mm or 35mm professional cameras. Leasing arrangements are available for producers of features, short subjects, industrial, documentary and educational films.

★

Trans-Lux Corporation, New York, pioneers in rear projection screens and projection equipment, has sold its rear screen catalogs and background slides to Jenfred, Inc., 36 West 57th St., New York. Latter company reportedly has largest collection in the world of original pictures made for b.g. projection, supplying many of the industry's TV film producers as well as TV stations.

★

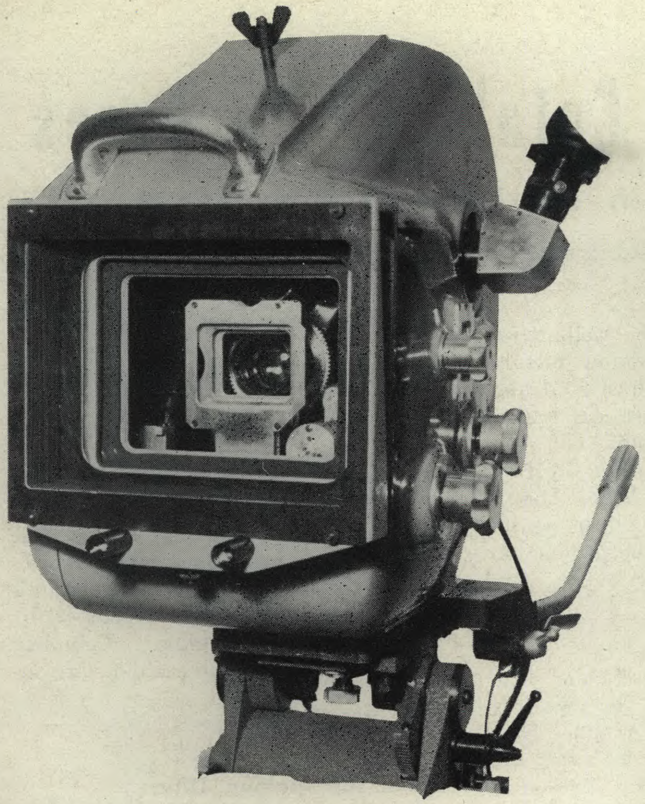
Expansion of laboratory and office facilities of Movielab Film Laboratories, Inc., were highlighted on March 30th in ceremonies observing the firm's 25th anniversary and dedication of its headquarters at 619 West 54th Street as the Movielab Building.

Current expansion increases Movielab's office and laboratory space to approximately 70,000 square feet, according to Saul Jeffee, president of company.

★

Correction

In the February issue of A. C., there appeared (somewhat delayed) in this column an item and illustration describing the Camart tightwind adapter, priced at $24.00. Manufacturer has called attention to fact that this model, now obsolete, has been replaced by a new and improved model priced slightly higher at $29.00.



CAMERETTE

Now Available with Two Important New Features!

- ★ Adapted for CinemaScope
- ★ Sound Blimp with Reflex Viewing

Now for the first time—a lightweight camera for CinemaScope photography—the 35mm Camerette with CinemaScope aperture, with full CinemaScope field visible through the reflex viewer. Auxiliary turret and matte for regular photography.

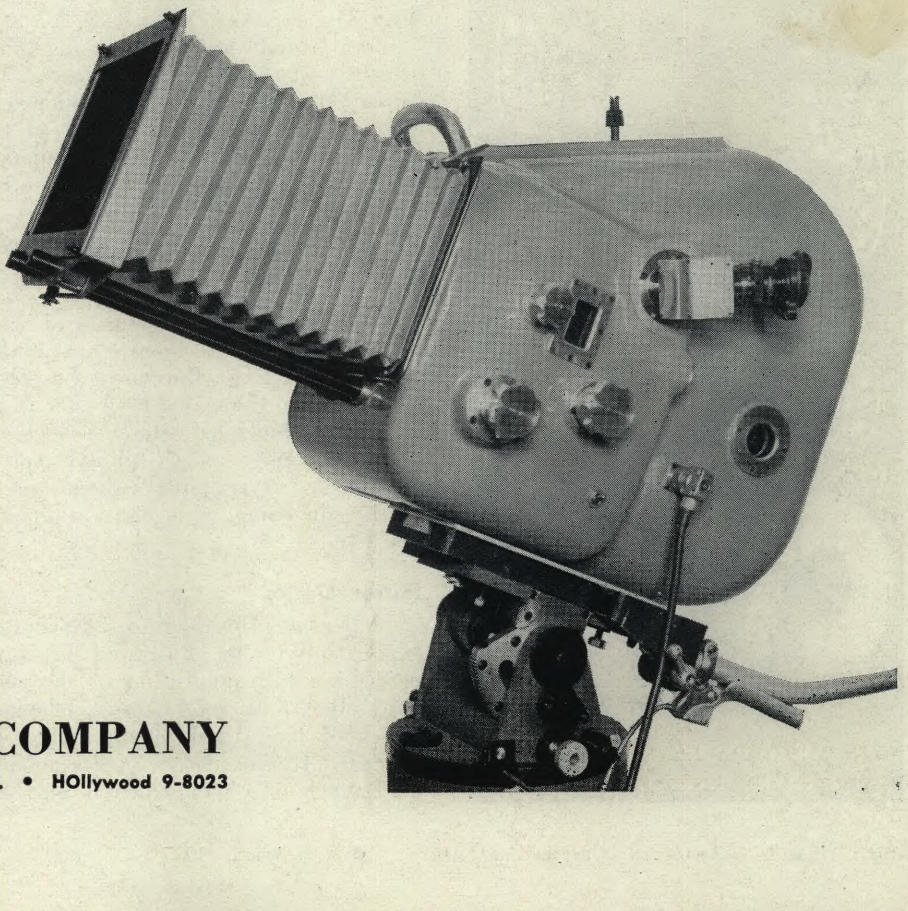
New magnesium alloy blimp with viewing through the taking lens at all times through the Camerette's reflex finder, making a lightweight, fully blimped combination 16mm or 35mm camera. Synchronous motors—110-v single phase, 220-v three phase.

ONLY THE CAMERETTE HAS

1. Ability to use both 16mm and 35mm film in one camera.
2. Reflex viewing through the taking lens at all times for both film sizes.
3. Sound blimp with reflex viewing, making a fully blimped, instantly interchangeable 16mm or 35mm camera.

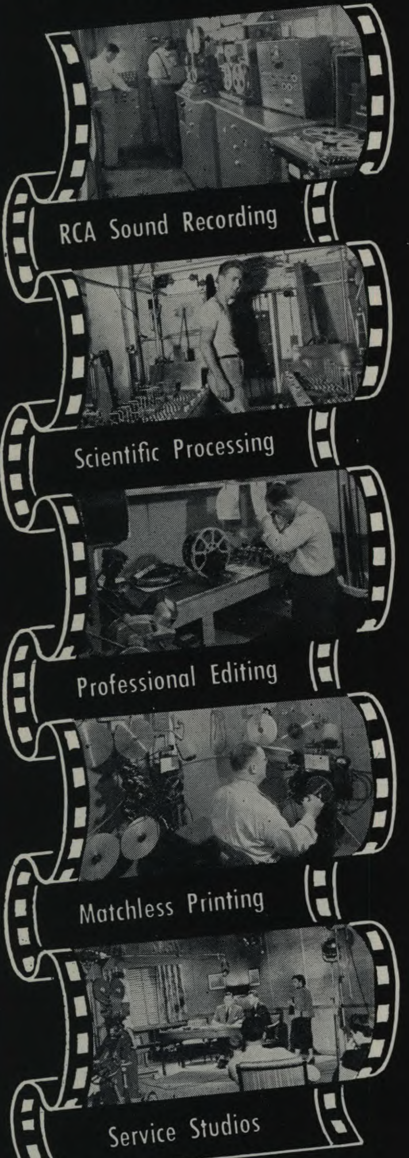
Patents Coutant-Mathot
Manufactured by Eclair, Paris

Write for descriptive literature



BENJAMIN BERG COMPANY
1410 N. VAN NESS AVE. • HOLLYWOOD 28, CALIF. • HOllywood 9-8023

HELP
for the
Harried Producer



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INC.
Formerly McGeary-Smith Laboratories, Inc.

1905 Fairview Ave., N. E.
Washington 2, D. C.
Telephone LAwrence 6-4634

Booklets Catalogs Brochures

available from equipment manufacturers

Animation Equipment

The complete line of the well-known and versatile Oxberry motion picture animation equipment is illustrated and described in a 9-by-12 loose leaf folder, available from the distributor, The Animation Equipment Corporation, 38 Hudson Street, New Rochelle, N. Y. Distributed by this company are all the equipment and accessories for the production of animated films, titles, etc.

★

Recording Equipment

A beautifully-illustrated 4-color brochure-catalog, just issued by Westrex Corporation, 111 Eighth Avenue, New York 11, illustrates and describes the company's line of magnetic, photographic and disk recording equipment. Comprehensive descriptions and the wealth of illustrations enable the reader to readily understand each piece of equipment and visualize its application in its respective field. Also included are descriptions of associated studio equipment and location recording power apparatus.

★

Processing Equipment

A new catalog of film processing equipment has just been issued by Television Specialty Company, Inc., 350 West 31st St., New York 1, N. Y.

Listed are all the processing machines presently available on the market. Information is also given as to which processing machine is best suited to the user's needs, based on maximum amount of film produced on a weekly or monthly basis.

★

Lens Data

Photographic Optics is title of well-illustrated 64-page booklet available from the Scientific Bureau of Bausch & Lomb Optical Company, Rochester, N. Y. It is a recommended reference book for all photographers—both still and motion picture, and is available without cost by writing the company at above address.

★

Mirror Optics

Wollensak Optical Co., Rochester, N. Y., offers an illustrated brochure describing the application of the company's line of Mirrotel Lenses—telephoto lenses of long focal length employing mirrors. Unique design makes possible an 80-inch telephoto which is only 20-inches in actual length from focal plane to front lens, as compared to 68-inches for the conventional 80-inch tele lens. Mirrotels may be used with almost any motion picture camera.

★

Film Processors

Houston-Fearless Corp., 11809 West Olympic Blvd., Los Angeles 64, have released a new brochure on the company's Model 11B automatic film developer for processing reversal films. Complete specifications and technical data are included.

★

16mm SOF-Making Data

How To Use Your "Cine-Voice" is title of informative, well-illustrated booklet now available from Berndt-Bach, Inc., 6902 Romaine Street, Hollywood 38, Calif., makers of the Cine-Voice camera. Prepared by the technical advisory service of the company, the booklet is a highly instructive treatise for anyone planning the production of 16mm sound films for the first time.

★

For Cine Filmers

Amateur movie makers should request mailings of "Movie News," published by Eastman Kodak Company, Rochester 4, N. Y. Issued every other month, it brings the cine filmer many interesting suggestions for personal movie making, some how-to-do-it ideas, and news of new accessories and equipment. The publication is free.

★

Describes Pathe "16"

The full frame follow focus feature of the unique Pathe "16" cine camera is illustrated and described in a brochure available from Director Products Corporation, 570 Fifth Ave., New York 36, N. Y.

★

16mm Printing Equipment

Specification sheets on 16mm film printers, combination 16mm and 8mm continuous printers, and a reduction and enlarging printer for 16mm and 8mm films offered by Uhler Cine Machine Co., 15778 Wyoming Ave., Detroit 38, Michigan, are available from the company.

38 Years of Lighting Experience*

*"If it's inside four walls,
we'll light it!"*

COLOR LIGHTING
SPECIAL QUICK-RIG EQUIPMENT
SET-SIZE UNLIMITED

Don't by-pass that big color job for lack of lighting equipment or large scale lighting experience. We have specially-designed, high output, quick-rig, lightweight equipment, created for today's tremendous color motion picture interiors. We are a *most complete* and *always dependable* source. Regardless of budget limitation or size, our all-inclusive contract service can help you solve that lighting problem! Lights—Generators—Grip Equipment—Cables—Boxes—Accessories, in quantity.

Bob Duggan–

THE STUDIO LIGHTING CO.

2212 North Halsted Street, Chicago 14, Illinois
Phone: EAstgate 7-2800

*SOME OF OUR REPEAT JOBS: DEMOCRATIC AND REPUBLICAN NATIONAL CONVENTIONS (7 TIMES) • PRESIDENTIAL CAMPAIGNS—LANDON, WILKIE, DEWEY (2), ROOSEVELT (2), TRUMAN, EISENHOWER • AMERICAN BOWLING CONGRESS (12 YEARS) • AMERICAN LEGION NATIONAL CONVENTIONS (7 TIMES) • ALL-STAR BOWLING TOURNAMENTS • HOLLYWOOD LOCATION UNITS FOR ALL MAJOR STUDIOS • PLUS HUNDREDS OF INDUSTRIAL AND TELEVISION FILMS THROUGHOUT U. S.

Manufacturers and Distributors of:

- **Bloop Punches**
- **Cans, Film Strip**
- **Editing Tables**
- **Film Bins**
- **Film Racks**
- **Flanges**
- **Film Editing Gloves**
- **Leader Stock, 16 & 35 mm**
- **Measuring Machines**
- **Plastic Cores, 16 & 35 mm**
- **Reels, 16 & 35 mm**
- **Reels, Non-Magnetic**
- **Split Reels**
- **Rewinds**
- **Sound Readers**
- **Splicers**
- **Storage Cabinets**
- **Vault Cans**
- **Scotch Tape**
- **Cloth Tape**
- **Sound Recording Tapes**

HOLLYWOOD FILM COMPANY

956 NO. SEWARD ST.
HOLLYWOOD 38, CALIF

precision film editing equipment

HO-23284

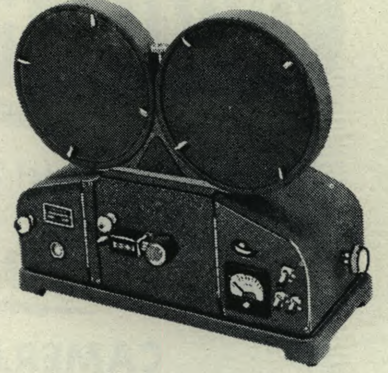
HERE UNDER ONE ROOF

... the One-Stop Source for all your

FILM PRODUCTION EQUIP.

OPTICAL RECORDING IS HERE TO STAY!

Do your own transfer of re-recording from magnetic or optical to 35mm film.



The LATEST BLUE SEAL 35mm FILM RECORDER

- Rotary film drum with stabilizer.
- Completely enclosed gear drive.
- Film footage counter.
- Synchronous motor 115V single phase or 220 volt 3 phase.
- Takes B & H type magazines.
- Precision machined thruout.

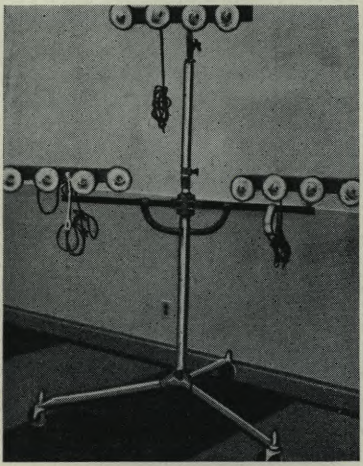
If you have a 16mm Auricon or Maurer you can now use your present amplifier equipment.

BLUE SEAL 35mm RECORDERS:

• without galvonometer; Reg. $5000	NOW $2695
• with Auricon Modulite Galvnomtr.; Reg. $5500	NOW $3190
• with Maurer Neg./Pos. Dual Track; Reg. $7500	NOW $4645
• with Blue Seal variable area dual bi-lateral track galvonometer; Reg. $6500	NOW $3895
• 1000 ft. Film Magazines	EACH $ 165

Auricon-Pro Owners Attention!!

S.O.S. will trade your old camera for the "All New Auricon Pro-600". ***Time Payments, too!***

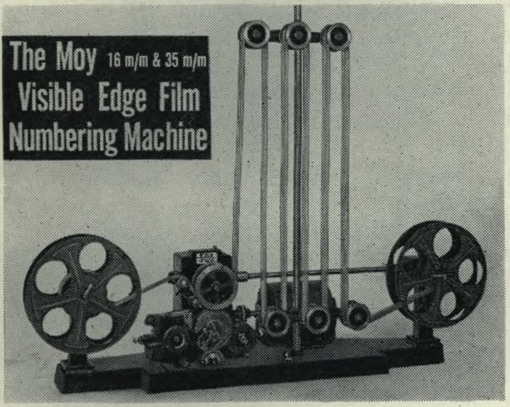


BARDWELL & McALISTER MULTIPLE STRIPLITES

for Spot or Flood

Extends 4′ to 15′ high. For indoor and outdoors. **3 Striplites, each has 4 swivel sockets & switch,** holds twelve 150W R40 lamps—totaling 1800W illumination. Folds to portable size. Tripod stand has two folding 1¼″ tubular steel arms 28″ long, with attached striplite lamp heads. Heads measure 2″ long x 2¼″ x 3″ high; weatherproof cable & plug. Rolling stand has three 4″ rubber tired casters. **Can also be used with Color-Tran converters.** Excellent condition. Orig. U.S. **Govt. Cost $180; NOW only $29.50.**

Same with One Striplite, holds four 150W lamps,	**$22.50**
Multiple Striplite Lamp Heads Only	**$ 4.95**
Telescopic Tripod Stand Only with 3 brackets	**$19.95**



Avoid the annoyance and many man hours lost classifying films without titles.

The MOY edge numbers every foot of 16 and 35mm film and simplifies the task of checking titles, footage.

IDENTIFY YOUR FILMS INSTANTLY

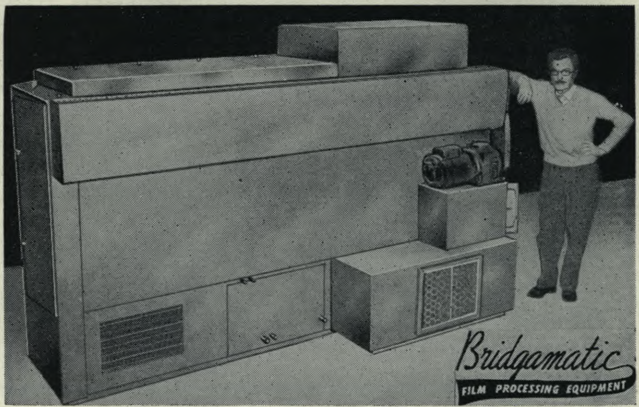
The MOY replaces cue marks, messy crayons, punches, embossing—does not mutilate valuable film. Work prints showing special effects, fades and dissolves require edge numbering to keep count of frames cut or added. Multiple magnetic tracks in CinemaScope stereophonic recordings make edge numbering a MUST.

With NEW improved Non-Clog Inking System $2475

Present MOY owners can easily install the new and improved inking system!

AMONG RECENT PURCHASERS ARE:

Reeves Soundcraft, Springdale, Conn.
Holland & Wegman, Buffalo, N.Y.
American Optical (Todd AO), Hollywood
Indonesian Supply Mission, N.Y.C.
Cinerama Productions, New York
Columbia Broadcasting System, N.Y.



BRIDGAMATIC 416D35, combination 16/35mm high speed automatic film developing machine, totally enclosed for daylight operation—one of 12 standard models.

DEVELOP YOUR OWN FILMS

A true one-man lab. Entirely automatic! Capable of speeds up to 3000′ per hr. positive, 1200′ per hr. negative, depending on developing times. Standard design has open tanks, outside feed-in and take-up reels. Variable speed transmission gives graduated control from zero to infinity. Built-in drybox allows 15 to 30 minutes drying time.

Illustrated brochure and questionaire analysis yours for the asking.

AMONG RECENT PURCHASERS ARE:

U.S. Army, Frankford Arsenal, Philadelphia, Pa.
A.I. Dupont Inst. (The Nemours Foundation), Wilmington, Del.
U.S. Naval Microfilm Laboratory, Washington, D. C.

A PRODUCT OF FILMLINE CORP.

PRICES START AT $1095

"The Department Store of the Motion Picture Industry"

S.O.S. CINEMA SUPPLY CORP.

602 WEST 52nd ST., NEW YORK 19, N.Y.
Phone: PLaza 7-0440 *Cable:* SOSOUND

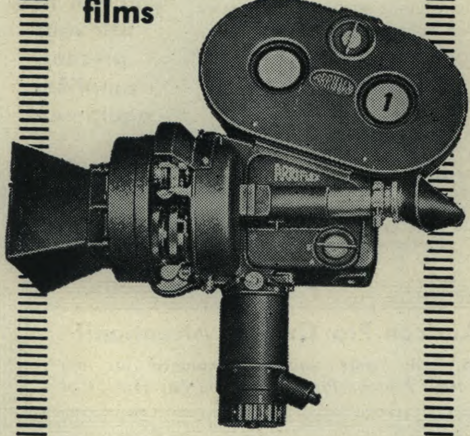
S.O.S. EST. 1926

ARRIFLEX

New 35 mm Model 2A
With 180° Shutter

A TRULY GREAT CAMERA

for TV, Newsreel and commercial films



For tough and trying assignments, ARRIFLEX 35 is in a class by itself. Reflex focusing through photographing lens while camera is operating—this is just one outstanding ARRIFLEX feature.

Equipped with bright, right-side-up image finder, 6½ x magnification. Solves all parallax problems. 3 lens turret. Variable speed motor built into handle operates from lightweight battery. Tachometer registering from 0 to 50 frames per second. Compact, lightweight for either tripod or hand-held filming. Takes 200' or 400' magazine. Write for free folder.

Blimp now available.
16mm ARRIFLEX also available.

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

WHAT'S NEW

. . . in equipment, accessories, service

Data Recording Unit

PAR Products Corporation, 926 No. Citrus Avenue, Hollywood 38, Calif., announces a data recording unit for use with the Cine-Special camera. It consists of an optical system which projects on the film frame the image of a clock, gauge, recording instrument, and/or data card. In the projected picture, the data information appears in the lower right hand corner of the frame. Data is recorded on emulsion side of film. Speed of the optical unit is f/4.5.

Unit was originally designed for the Mayo Clinic for use in cine-photomicrography. It is readily detached from camera for ordinary picture making.

Film Coding Machine

Hollywood Film Company, 956 No. Seward Street, Hollywood 38, Calif., offers a new coding machine for 16mm and 35mm film. Both models will code up to and including 3,000 ft. reels of film. A free-wheeling, precision-machined contact roller assures uniform application of the ink code marks without over-pressure embossing of numbers on film. Exclusive inking method permits individual hand operation of coding when necessary.

Other features include a Veeder-Root counter, and an American Ink numbering machine. Price of either 16mm or 35mm model is $2,500, f.o.b. Hollywood.

Automatic Printer Fader

Bell & Howell Co., 7100 McCormick Road, Chicago 45, Ill., announces a simple easy-to-install automatic fader for installation on model D or J printers. User can install the fader without need of sending printer to the factory.

Net price is $700.00.

Pan Handle Modification

Cinekad Engineering Company, 500 West 52nd St., New York, offers the Quiq-Set joint attachment for pan-tilt handle of the Junior-Pro tripod. With the Quiq-Set modification, pan-tilt handle can be adjusted to the required angle most comfortable for the cameraman, and affords accurate control of camera movement. Interlocking precision-cast teeth insure rigid position of handle. No tools are required to install.

Printer Fader

Motion Picture Printing Equipment Company, Skokie, Ill., announces an automatic fade attachment for use with model "JA" and "DA" Bell & Howell continuous contact printers. Unit is designed to function with the 300-watt super high-intensity printer lamphouse, and is easily inserted into the lamphouse in place of the filter holder. A filter holder pack is supplied.

Shutter blades are driven by a mechanical clutch, which is connected to a variable-speed motor, permitting varying the lengths of fades. Indicator light shows when shutter blades are open and closed.

List price is $695.00, f.o.b. Hollywood.

Fade attachments also are available for Bell & Howell "J" and "D" printers.

Background Projector

Television Specialty Company, Inc., 350 West 31st St., New York 1, N. Y., offers a compact, highly-efficient rear-screen projector for use in television production. Coated optical system improves light and image efficiency 20%.

Other features include dimmer control, slide changer, cooling system, wide-angle Bausch & Lomb f/2.7 lens, soundproofed to insure quiet operation on the set, takes 4″ by 5″ slides, and the price of $1,625.00 f.o.b. New York includes set of six basic slides, and an 8-ft. by 10-ft. screen

Mood Music

Audio-Master Corporation, 17 East 45th Street, New York 17, announces the addition of 40 sides of music to its mood music and effects library

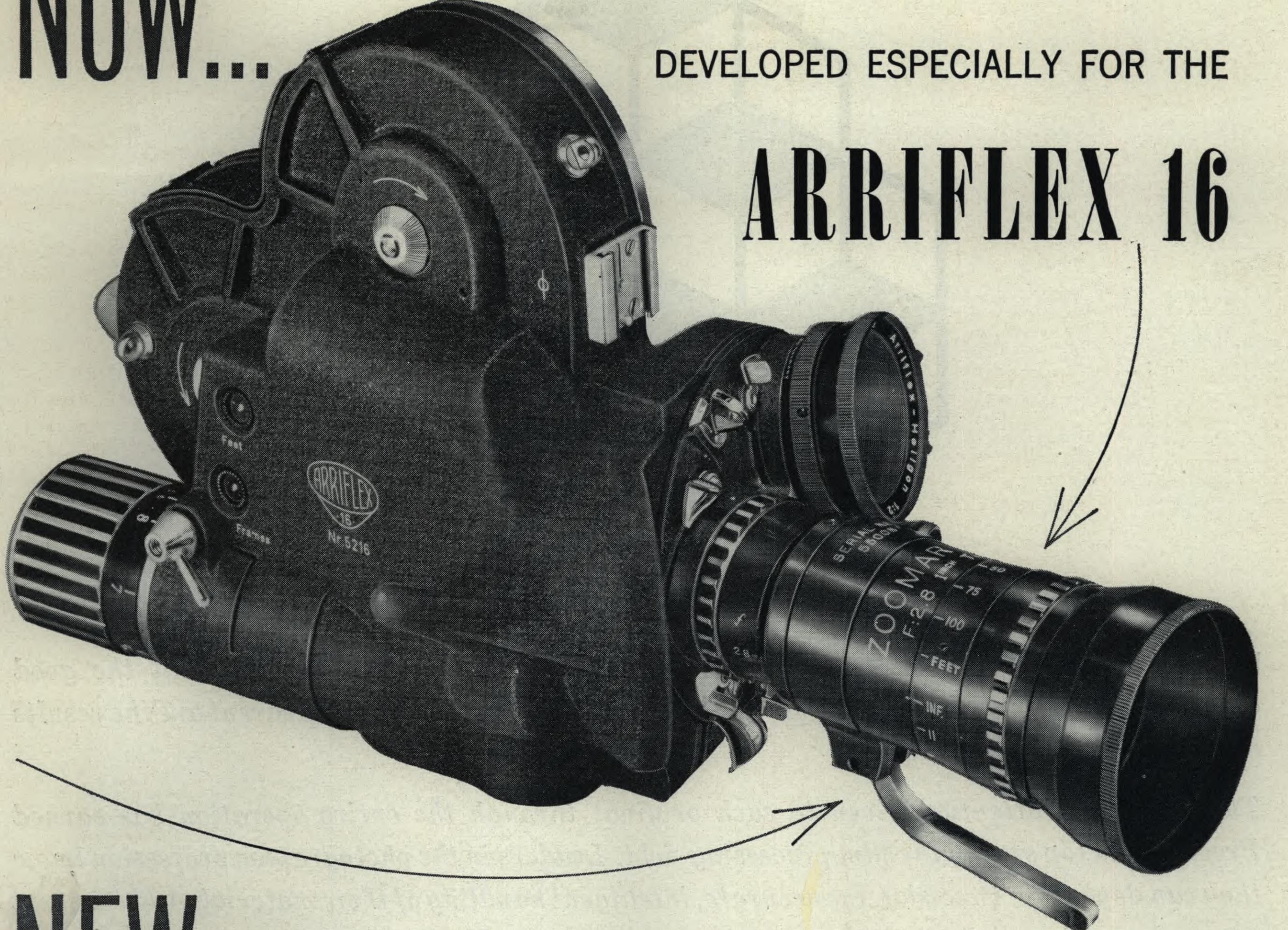
New selections contain production numbers, dramatic and powerful openings and closings, as well as unusual commercial and industrial sound effects.

The new recordings bring to over 500 the number of diversified, out-of-the-ordinary selections to producers of industrial, educational and television films.

NOW...

DEVELOPED ESPECIALLY FOR THE

ARRIFLEX 16



NEW ZOOMAR 16·S

No movie camera is so well suited for the Zoomar varifocal lens as the Arriflex 16. It's the ideal combination because:

1 The Arriflex is the only camera with Mirror Reflex shutter, no external finder is used for the Zoomar lens . . .

2 You focus and view the scene while actually shooting—*through the Zoomar lens . . .*

3 You needn't remove other lenses because the divergent lens turret permits any two other lenses to be used with the Zoomar 16-S without optical or mechanical interference . . . and

4 The vertical lever action of the zoom control is smoother and more positive than the rotary movement usually employed.

SPECIFICATIONS

Varifocal Range	25mm to 75mm
Aperture Range	f2.8 to f16
Focusing Range	8 feet to Infinity

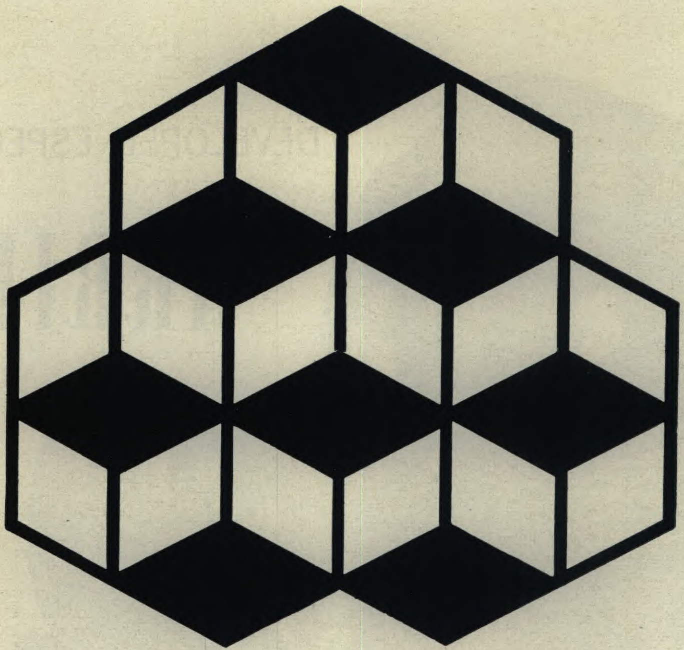
Built-in Lens Hood/Filter Holder for Series VII

$\$579^{00}$

Note: The Zoomar 16-S is not interchangeable with the standard model, nor can the standard model be converted for use with the Arriflex.

World Wide Distributors: **KLING** PHOTO CORP.

235 Fourth Ave., New York 3, N. Y.
7303 Melrose Ave., Hollywood 46, Cal.



How many blocks? 6 or 7? *Appearances can be deceiving, but the good appearance of a Precision print is not an optical illusion. Immediately apparent are the results of Precision-quality processing.*

The individual attention given to each original through the entire operation has earned Precision its top spot in the film processing field. Leaders in the photographic profession know they can depend on Precision for accurate, intelligent handling of their material. And constant research continues for even better ways to serve your requirements.

In everything there is one best... in film processing, it's **Precision.**

PRECISION

FILM LABORATORIES, INC
21 WEST 46TH STREET, NEW YORK 36, N. Y.

A division of J. A. Maurer, Inc.

MOTION PICTURE PRINTING EQUIPMENT CO.
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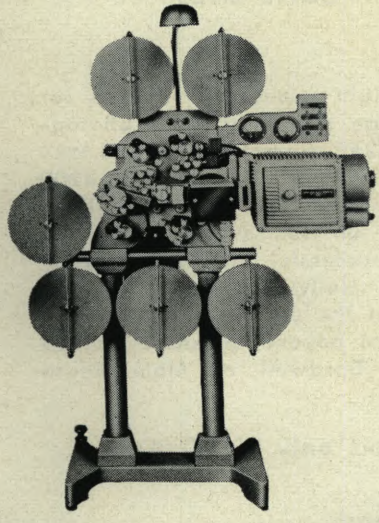

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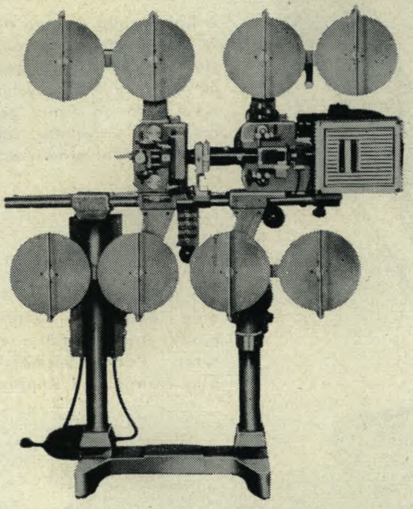

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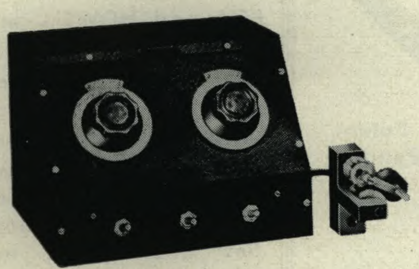

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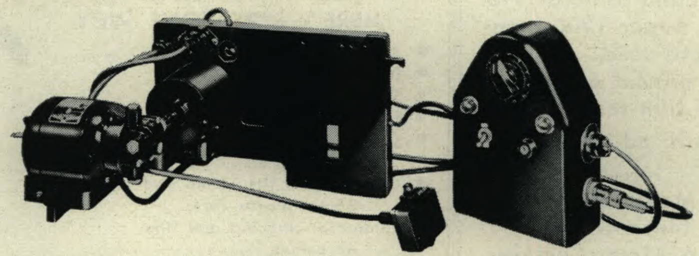

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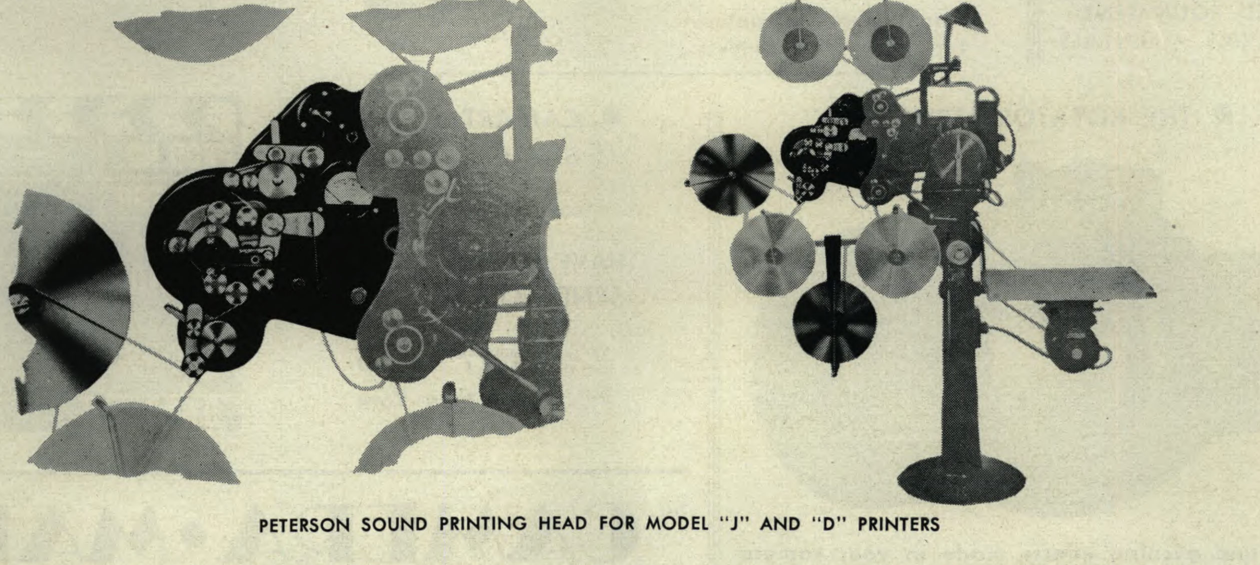

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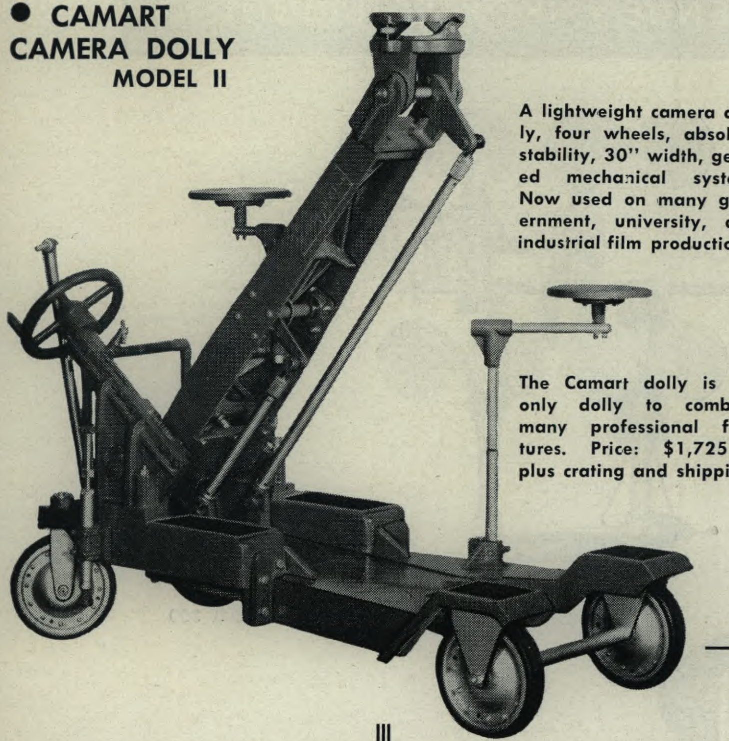

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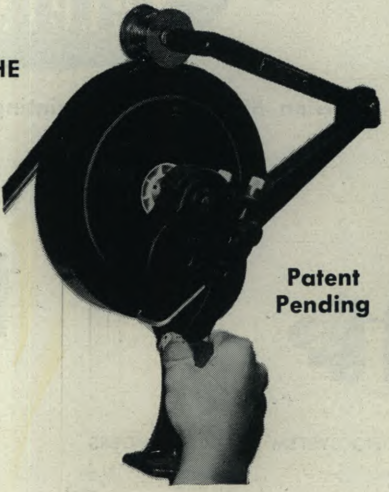

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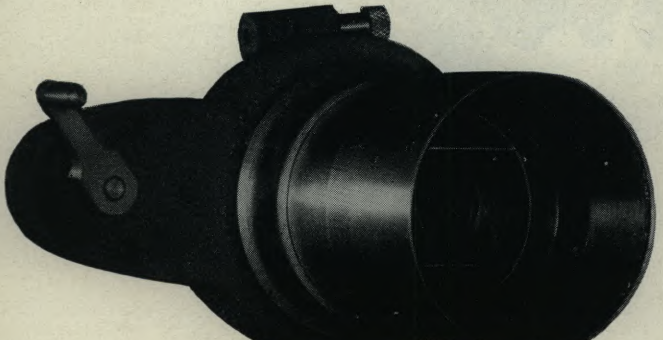

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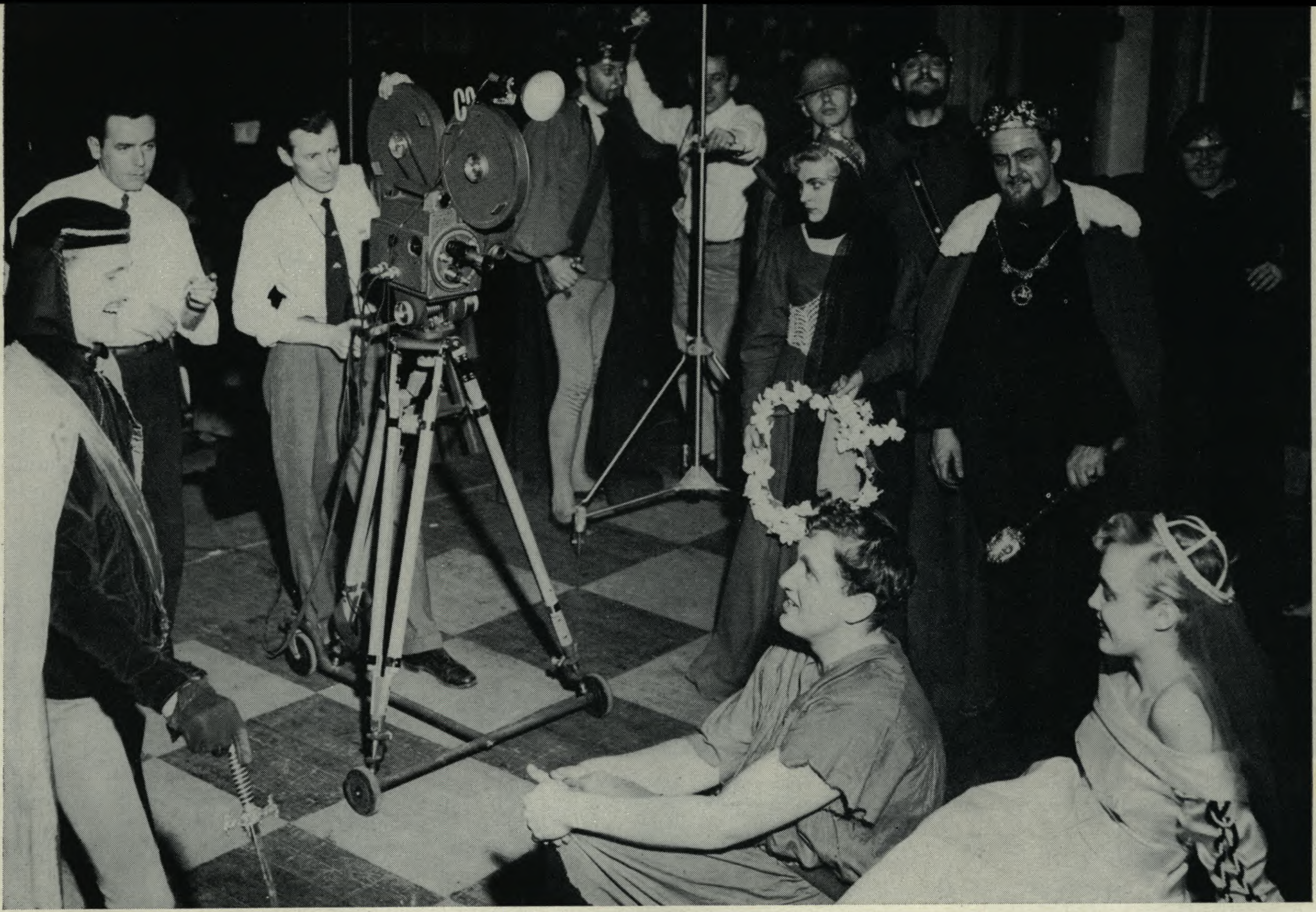


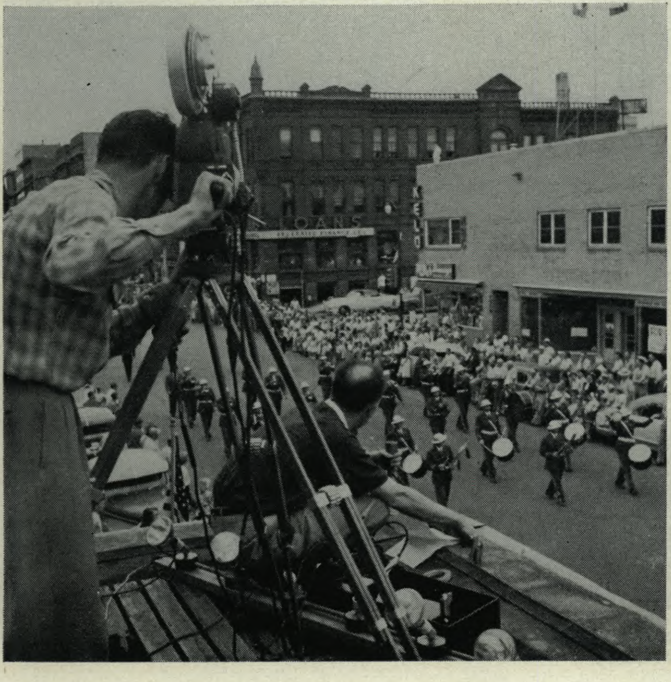
DRAMA—Glenn Wentzel, KELO-TV's cameraman, standing behind the Auricon "Super 1200" camera, films a college dramatization of "Hamlet"—typical of local events which are recorded on 16mm film for telecasting by station KELO-TV, Sioux Falls, S.D.

An All-film Television Station

By GLENN WENTZEL

Head Cameraman, KELO-TV, Sioux Falls, S.D.

How an enterprising TV station operates entirely with motion picture film, with its own camera crew turning out both program material and commercials on 16mm film.



NEWS—Wentzel and his Auricon camera cover a parade in Sioux Falls for a KELO-TV television newscast.

ONE OF THE INTERESTING stories in the TV industry is the way station KELO in Sioux Falls, South Dakota went into television broadcasting and sustained the operation profitably for more than twenty months without a television camera—using motion picture film entirely.

When Joe Floyd took over radio station KELO it was with the object of setting up the first television station in this area. The nearest station at the time was over 200 miles away. There were no network facilities available, such as CBS,

(Continued on next page)

COMMERCIALS—Filming a local disk jockey doing a commercial in KELO-TV's film studio. Some of the station's modern set lighting equipment is shown here.

NBC or Dumont, which meant that all programming would have to originate with the station.

Floyd, a veteran film exhibitor who had operated a string of theatres in South Dakota, naturally saw the possibilities of motion picture film as both a source of programming material and a means of putting the advertiser's message before KELO-TV's viewers.

We began operations as an all-film television station in May, 1953. Once the decision was made to operate entirely with film, we set about to acquire the necesary equipment and to plan operations so that we would always be comfortably ahead of deadlines. One of our first purchases was an Auricon-Pro 16mm single-system sound camera. Other equipment acquired was an Auricon-Pro tripod, mike boom, a lightweight camera dolly, and a portable power pack for operating the camera on remote locations where AC current would not be available.

A few months later, we added another camera to our equipment—the smaller Auricon Cinevoice camera. This is a compact single-system 16mm sound camera—very handy for use on remote locations as well as in the studio. This camera was equipped with a Pan Cinor zoom lens, and subsequently with a larger, 600-ft. capacity film magazine.

Almost from the very beginning the progress and success of KELO-TV's operation was marked by the acquisition of new and better equipment. We had been in operation less than six months when we replaced the Auricon Pro camera with the Auricon "Super 1200," which affords a film capacity up to 1200 feet. In addition to the added film capacity, we now required a more professional production camera. Three features of this camera proved especially advantageous to us: the finger-tip controlled lens turret, the critical focus (through taking lens) device—ideal for ultra closeups, titles, etc.—and the adjustable shutter which permits us to make fades and dissolves with the camera—effects that are essential in any professional TV film production.

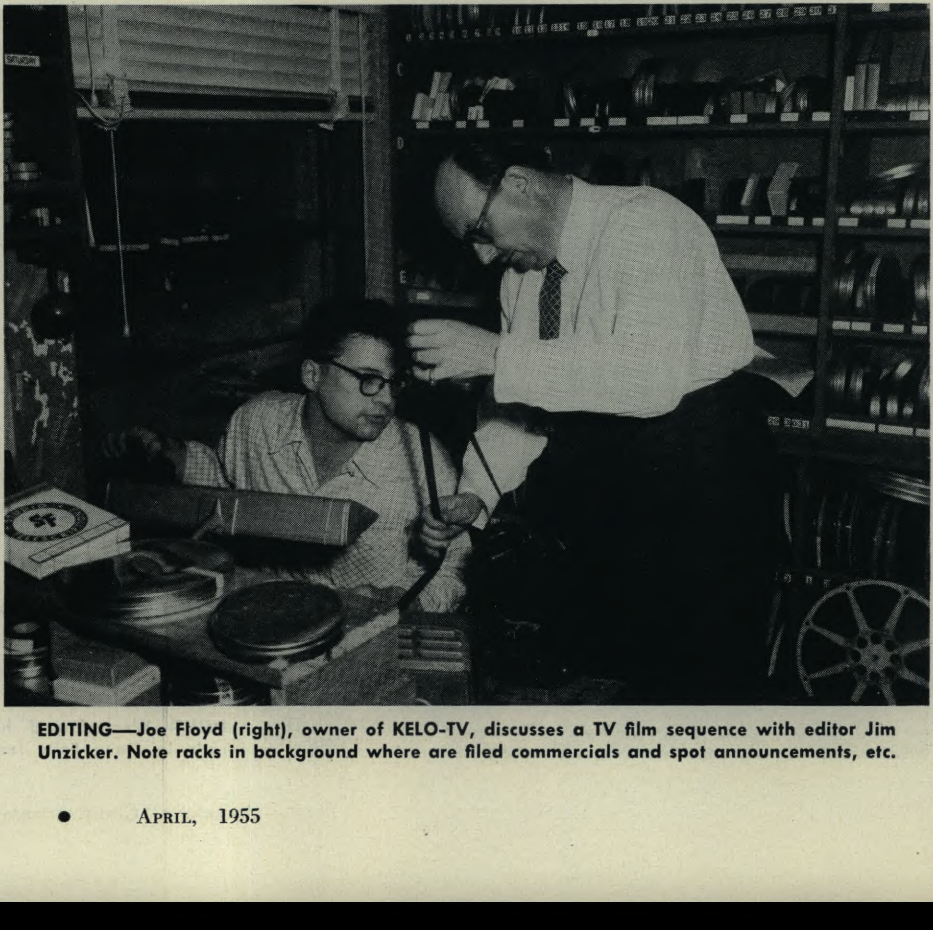
In the very beginning of our filming operations, our studio lighting equipment consisted of a Colortran converter plus a number of lighting units using Par-38 flood lamps; also a number of No. 4 Photofloods mounted in scoop reflectors on stands, and miscellaneous Kliegel spots and Mazda flood units. As we progressed, overhead lighting units of the telescoping suspension type were installed. These now enable us to obtain more uniform lighting for our daily studio-filmed programs and commercials.

We usually get by on location or remote interior filming using three 15-ampere circuits of house current, depending of course on the size of the area to be lighted, the action, or the number of people involved. Where the area is large and there is the time for it, we usually send out an electrician in advance to run a special line to carry the added load.

We use mostly fast DuPont Type 930 and Type 931 films with their 100 per cent increase in reversal-processing speed. To date, we have shot, processed and televised about 2,000,000 feet of film. The processing procedure recommended for the films automatically established an ASA rating of approximately 125 for the use of Type 931 in interiors. This calls for roughly 8000 watts of light on a small size set or location interior.

In the beginning, the station consid-

(Continued on Page 234)



EDITING—Joe Floyd (right), owner of KELO-TV, discusses a TV film sequence with editor Jim Unzicker. Note racks in background where are filed commercials and spot announcements, etc.

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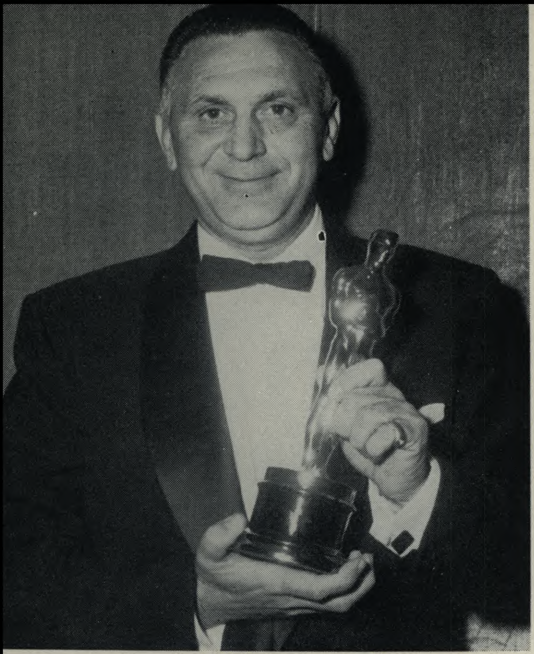
Academy Award Winners

Milton Krasner and Boris Kaufman cited for best photographic achievements of 1954.



MILTON KRASNER, ASC, who received 1954 Academy Award "Oscar" for best photography of a color production—"Three Coins in the Fountain."

BESIDES AN "OSCAR" for best black-and-white photography of "On the Waterfront," Boris Kaufman, ASC, also received the annual Look Award and Golden Globe Award of Hollywood Foreign Correspondent's Association for photography of the same picture.

TWO NAMES, both new, were added to the roster of "Oscar" winners for cinematography this year, when Milton Krasner, A.S.C., and Boris Kaufman, A.S.C., received Academy Awards last month for photographic achievement.

Krasner was awarded an "Oscar" for best photography of a color film, as result of his outstanding camera work on the Twentieth Century-Fox CinemaScope production, "Three Coins In The Fountain."

Kaufman received his "Oscar" for best achievement in photography of a black-and-white film — the Horizon-American-Columbia Pictures' production "On the Waterfront."

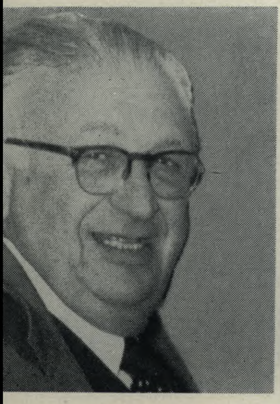
Occasion was the twenty-seventh annual awards presentation ceremonies of the Academy of Motion Picture Arts and Sciences held jointly in Hollywood and New York, and televised nationally by NBC.

Of the two winners for cinematography, only Krasner was present in Hollywood to accept his award. Kaufman accepted his "Oscar" in the Century Theatre in New York, where many other Academy Award nominees were also gathered.

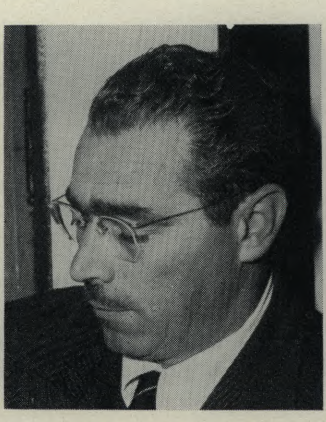
It is the first time that either director of photography has graced the winners' circle in the annual "Oscar" derby. Milton Krasner has been a contender on two previous occasions. "Arabian Nights," which he photographed in 1941, was nominated for a cinematography award the following year, and he was among the cinematography award nominees again in 1951 for his photography of the black-and-white production, "All About Eve." Boris Kaufman, who only recently came to this country from France, has no previous nominations to his record. However, prior to the Academy Awards, Kaufman had already received the Look Award and the Golden Globe Award of the Hollywood Foreign Correspondent's Association for the photography of "Waterfront."

Voted "Best Picture of 1954" by the Academy, the salient feature of "On the Waterfront" is the stark and imaginative black-and-white photography rendered by Boris Kaufman's artistic lighting and skillful camera treatment. The manner in which he took advantage of the bleak, wintry atmosphere that prevailed to point up the portrayals set in waterfront docks and slums, is a distinct credit to his cinematic artistry. In other instances, Kaufman's searching camera missed nothing that would give the picture superior dramatic impact—huge, full-head closeups of off-balance silhouettes are memorable highlights in this picture that exposes gangsterism on the rampage along the east coast waterfront.

Milton Krasner's photographic achievement represented by the beautiful color photography of "Three Coins In the Fountain" is marked by many artfully composed exteriors of the Italian countryside. There have been quite a number of major productions filmed in Italy in recent years, but Krasner captured native Italian scenes with an artistry as yet unmatched by any other cinematographer. Equally artistic are the many interiors, where the lighting



KARL FREUND, ASC
Scientific Award



DAVID S. HORSLEY, ASC
Scientific Award

LOREN L. RYDER, ASC
Scientific Award

JOHN R. BISHOP, ASC
Scientific Award

RALPH HAMMERAS, ASC
Best Special Effects

the special effects in "20,000 Leagues Under The Sea." Individual credit for this achievement goes to Ralph Hammeras, A.S.C., director of special effects for Disney, and members of his staff.

Other major awards presented by the Academy this year are as follows:

Best Motion Picture: "On the Waterfront."

Best Actress: Grace Kelly, "The Country Girl," Paramount.

Best Actor: Marlon Brando, "On the Waterfront."

Best Supporting Actress: Eva Marie Saint, "On the Waterfront."

Best Supporting Actor: Edmond O'Brien, "Barefoot Contessa," Figaro-United Artists Production.

Best Direction: Elia Kazan, "On the Waterfront."

Best Motion Picture Story: Philip Yordan, "Broken Lance," 20th Century-Fox.

Best Screenplay: George Seaton, "The Country Girl," Perlberg-Seaton, Paramount.

Best Story and Screenplay: "On the Waterfront."

Best Art Direction: (black-and-white) Richard Day, "On the Waterfront." (Color) John Meehan, "20,000 Leagues Under The Sea," Walt Disney.

Best Set Decoration: Emil Kuri, "20,000 Leauges Under The Sea."

Best Costume Design: (black-and-white,) Eidth Head, "Sabrina," Paramount. (Color) Sanzo Wada, "Gate of Hell," Daiei-Edward Harrison Productions, Japan.

Best Film Editing: Gene Milford, "On the Waterfront."

Best Sound: "The Glenn Miller Story," Universal-International, Leslie I. Carey, sound engineer.

The selection of eligible films for the Academy's annual awards for photography begins with the cinematographers themselves. The first of January, each director of photography in the Hollywood motion picture industry is invited to nominate one black-and-white and one color feature production on which he has received sole or joint screen credit. Titles of these films are then included in a preliminary ballot, which is then sent to all directors of photography in the industry.

In addition to the two pictures of his own filming which he may nominate, each director of photography at his own discretion may also nominate any one eligible black-and-white and one eligible color foreign production which he deems worthy of Academy consideration. Thus, many foreign-made films have a chance to compete with Hollywood productions for the Academy's cinematographic awards. Films are considered eligible for the Academy's consideration when they have been exhibited publicly in Los Angeles in a consecutive run of not less than one week, after an opening prior to midnight December 31st.

On receipt of the preliminary ballot, which contains the names of all the films entered by the various directors of photography, each man then votes for ten (or less) productions in each classification, in the order of his preference. When the Academy tabulates the votes, the twenty productions receiving the greatest number of votes are then screened by the Academy to give all directors of photography opportunity to evaluate them under uniform screen conditions.

Following these screenings, which are spread over a period of two weeks, a nomination ballot listing the ten black-and-white and ten color productions is mailed to all directors of photography with instructions to vote for five in each class which they consider best, listing them in order of preference. Following the final Academy tabulations, the five

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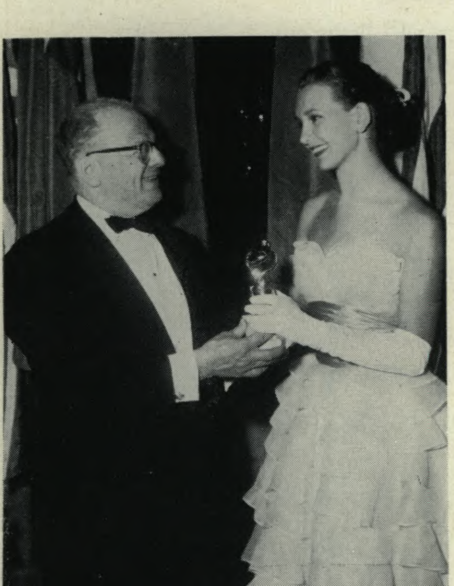
★ ★

Golden Globe And Look Award Winners



JOSEPH RUTTENBERG, ASC, receives Golden Globe award from actress Taina Elg for best color photography of M-G-M's "Brigadoon."

WHILE THE Academy "Oscar" is considered the major annual award among directors of photography, there are other significant and important awards which are bestowed annually for achievement in cinematography. They are the Golden Globe Award of the Hollywood Foreign Correspondents' Association, the Look Award sponsored by Look magazine, and the "Emmy" of the Academy of Television Arts and Sciences, which is described elsewhere in this issue. No less important are the citations for best photography of a motion picture which is included each year in Film Daily's "Filmdom's Famous Fives."

Winner of this year's Golden Globe Award for the best photographed color production of 1954, was Joseph Ruttenberg, A.S.C., for the photography of the Metro-Goldwyn-Mayer production, "Brigadoon." This artfully photographed color film, while it was among the original list of productions submitted for Academy consideration, failed to survive in the final balloting which would have placed it among the Academy's five color production nominees.

Ruttenberg's photography is invariably of championship calibre, as his many photographic awards attest. He won an Academy Award in 1939 for photography of "The Great Waltz," and again in 1943 for the photography of "Mrs. Miniver."

The Golden Globe Award for black-and-white photography this year was awarded Boris Kaufman, A.S.C., for "On the Waterfront." Look magazine which makes a single annual award for achievement in cinematography, also chose "On the Waterfront" for best photography this year bringing the total of awards to three received this year by Kaufman for the same picture.

In December each year, Film Daily, motion picture trade paper, polls the nation's film reviewers, motion picture correspondents, columnists, editors and commentators to select the best five photographed pictures, in addition to the best five achievements in other classifications of motion picture production. "On the Waterfront" was one of the five productions named in Film Daily's list of Best Photographed Pictures.

Others were, "Three Coins in the Fountain," photographed by Milton Krasner, A.S.C.; "White Christmas," photographed by Loyal Griggs, A.S.C.; "Rear Window," photographed by Robert Burks, A.S.C.; and "The Egyptian," filmed by Leon Shamroy, A.S.C.

★ ★

and the composition easily vie for honors with the natural beauty of the exterior scenes. In all, "Three Coins In The Fountain" is an unforgettable photographic gem, and easily deserved the Academy award accorded it. With two previous Academy Award nominations to his credit, it was inevitable that sooner or later Krasner would make the winner's circle and take home an "Oscar."

In all, ten major film productions of 1954 were nominated for cinematography awards by the Academy. The seven directors of photography who had nominated pictures in the running, in addition to Krasner and Kaufman, have each received a Nomination Certificate from the Academy, which in itself is considered something more than a consolation award in the industry. These cinematographers and their nominated pictures are:

Robert Burks, A.S.C., "The Rear Window," Paramount.

George Folsey, A.S.C., "Executive Suite," and "Seven Brides For Seven Brothers," Metro-Goldwyn-Mayer.

Charles Lang, Jr., A.S.C., "Sabrina," Paramount.

John Seitz, A.S.C., "Rogue Cop," Metro-Goldwyn-Mayer.

Leon Shamroy, A.S.C., "The Egyptian," 20th Century-Fox.

William V. Skall, A.S.C., "The Silver Chalice," Warner Brothers.

John F. Warren, "Country Girl," Paramount.

Five other A.S.C. members figured directly or indirectly in the Awards for special effects, scientific or technical achievements. Karl Freund, A.S.C., and Frank Crandell jointly received the Academy's Class III Scientific and Technical Award for the design and development of a direct-reading brightness spot meter.

David S. Horsley, A.S.C., until recently head of the special photographic effects department at Universal-International studios, received a Class III Scientific and Technical Award for the development of a portable remote control device for process projectors.

Loren L. Ryder, A.S.C., and John R. Bishop, A.S.C., along with members of Paramount Pictures' technical and engineering staff, received a Class I Scientific and Technical Award "for developing a method of producing and exhibiting motion pictures known as Vistavision." Ryder is head of Paramount's engineering department; Bishop is head of that studio's camera department.

It is the Academy's custom to make awards for special Effects in the name of the studio producing the picture nominated for the award. This year, the award went to Walt Disney Studio for

(Continued on Next Page)

ROSTER OF "OSCAR" WINNERS FOR CINEMATOGRAPHY

1928 to 1954

Year	*Class.*	*Cameraman*	*Picture Title*	*Studio*
1954	B&W	Boris Kaufman, A.S.C.	"On the Waterfront"	Col.
1954	Color	Milton Krasner, A.S.C.	"Three Coins in the Fountain"	Fox
1953	B&W	Burnett Guffey, A.S.C.	"From Here To Eternity"	Col.
1953	Color	Loyal Griggs, A.S.C.	"Shane"	Para.
1952	B&W	Robert Surtees, A.S.C.	"The Bad and the Beautiful"	MGM
	Color	Winton Hoch, A.S.C. Archie Stout, A.S.C.	"The Quiet Man"	Argosy
1951	B&W	William Mellor, A.S.C.	"A Place In The Sun"	Para.
	Color	Alfred Gilks, A.S.C. John Alton, A.S.C.	"American In Paris"	MGM
1950	B&W	Robert Krasker	"The Third Man"	British
	Color	Robert Surtees, A.S.C.	"King Solomon's Mines"	MGM
1949	B&W	Paul Vogel, A.S.C.	"Battleground"	MGM
	Color	Winton Hoch, A.S.C.	"She Wore Yellow Ribbon"	R.K.O.
1948	B&W	William Daniels, A.S.C.	"The Naked City"	U-I
	Color	Joseph Valentine, A.S.C. William V. Skall, A.S.C. Winton Hoch, A.S.C.	"Joan Of Arc"	R.K.O.
1947	B&W	Guy Green	"Great Expectations"	Rank-U-I
	Color	Jack Cardiff, A.S.C.	"Black Narcissus"	Rank-U-I
1946	B&W	Arthur Miller, A.S.C.	"Anna And King Of Siam"	Fox
	Color	Charles Rosher, A.S.C. Leonard Smith, A.S.C. Arthur Arling, A.S.C.	"The Yearling"	MGM
1945	B&W	Harry Stradling, A.S.C.	"Picture Of Dorian Gray"	MGM
	Color	Leon Shamroy, A.S.C.	"Leave Her To Heaven"	Fox
1944	B&W	Joseph LaShelle, A.S.C.	"Laura"	Fox
	Color	Leon Shamroy, A.S.C.	"Wilson"	Fox
1943	B&W	Arthur Miller, A.S.C.	"Song Of Bernadette"	Fox
	Color	Hal Mohr, A.S.C. W. Howard Greene	"Phantom Of The Opera"	Univ
1942	B&W	Joseph Ruttenberg, A.S.C.	"Mrs. Miniver"	MGM
	Color	Leon Shamroy, A.S.C.	"The Black Swan"	Fox
1941	B&W	Arthur Miller, A.S.C.	"How Green My Valley"	Fox
	Color	Ernest Palmer, A.S.C. Ray Rennahan, A.S.C.	"Blood And Sand"	Fox
1940	B&W	George Barnes, A.S.C.	"Rebecca"	Selznick
	Color	George Perrinal	"Thief Of Bagdad"	Korda
1939	B&W	Gregg Toland, A.S.C.	"Wuthering Heights"	Goldwyn
	Color	Ernest Haller, A.S.C. Ray Rennahan, A.S.C.	"Gone With The Wind"	Selznick-MGM
1938		Joseph Ruttenberg, A.S.C.	"The Great Waltz"	MGM
1937		Karl Freund, A.S.C.	"The Good Earth"	MGM
1936		Tony Gaudia, A.S.C.	"Anthony Adverse"	WB
1935		Hal Mohr, A.S.C.	"Midsummer Night's Dream"	WB
1934		Victor Milner, A.S.C.	"Cleopatra"	Para.
1933		Charles B. Lang Jr., A.S.C.	"A Farewell To Arms"	Para.
1932		Lee Garmes, A.S.C.	"Shanghai Express"	Para.
1931		Floyd Crosby, A.S.C.	"Tabu"	Para.
1930		William Van Der Veer Joseph T. Rucker	"With Byrd At So. Pole"	Para.
1929		Clyde DeVinna, A.S.C.	"White Shadows In So. Seas"	MGM
1928		Charles Rosher, A.S.C. Karl Struss, A.S.C.	"Sunrise"	Fox

An "Emmy" For Cinematography

Lester Shorr wins first ATAS trophy awarded for TV film photography

By LEIGH ALLEN

"EMMY"—annual trophy award of the Academy of Television Ars and Sciences for artistic and technical achievements in television.

A NEW AND IMPORTANT photographic award was presented for the first time this year for achievement in motion picture photography.

The annual awards of the Academy of Television Arts and Sciences this year included an "Emmy" for the best direction of photography of a filmed television show.

It went to Lester Shorr for the photography of "I Climb The Stairs," a film in the currently popular "Medic" television series.

With the tremendous weekly output of television films now requiring the services of more directors of photography than does feature film production, the annual "Emmy" award for TV film photography assumes an importance to cinematographers comparable to that of the now famous "Oscar" awarded by the Academy of Motion Picture Arts and sciences for theatrical film photography.

Although only one "Emmy" was awarded this year, it is likely that the award will be increased to two or more in future years. It was so in the very beginning of the "Oscar" awards; only one was awarded for cinematography for a number of years, until the production of films in color became general. Then the award was increased to two—one for each classification.

LESTER SHORR holds "Emmy" presented him last month by the Academy of TV Arts and Sciences for best Direction of Photography of a television film—that of "I Climb The Stairs" in the popular "Medic" television series.

The television academy—ATAS—is still a young organization, but growing in importance each year. Its decision to present annually an "Emmy" for achievement in TV filming is considered a wise and important move for the Academy.

There were only eight television stations on the air in the United States in November, 1946, when the Academy of Television Arts and Sciences was formed in Hollywood by a group of seven men, as a non-profit organization dedicated to the advancement of television.

Edgar Bergen was named first president of the Academy, which, from its small beginning nearly nine years ago, has grown to a membership today of more than 700. President of the ATAS now is Don DeFore, who took office last year.

"Emmy," nationally famous award statuette of the Academy, has a history all its own. It was designed by artist Louis McManus, and named by Harry R. Lubcke, the Academy's president in 1949. The name was derived from the word "Immy," an engineering term relating to the Image Orthicon camera.

The 34 National "Emmy" Awards for 1954, plus the seven Hollywood Achievement Awards made at the presentation ceremony last month, contrast sharply with the first dinner in 1948 when only four awards were made. Five years ago eleven "Emmy" awards were presented. The awards for '54 more than doubled the number of awards given for 1953.

The acquisition by Lester Shorr of the first "Emmy" to be

(Continued on Page 230)

Shooting "Oklahoma!" In Todd-AO

Some of the differences in photographic technique which this newest of wide-screen systems demands of the director of photography.

By HERB A. LIGHTMAN

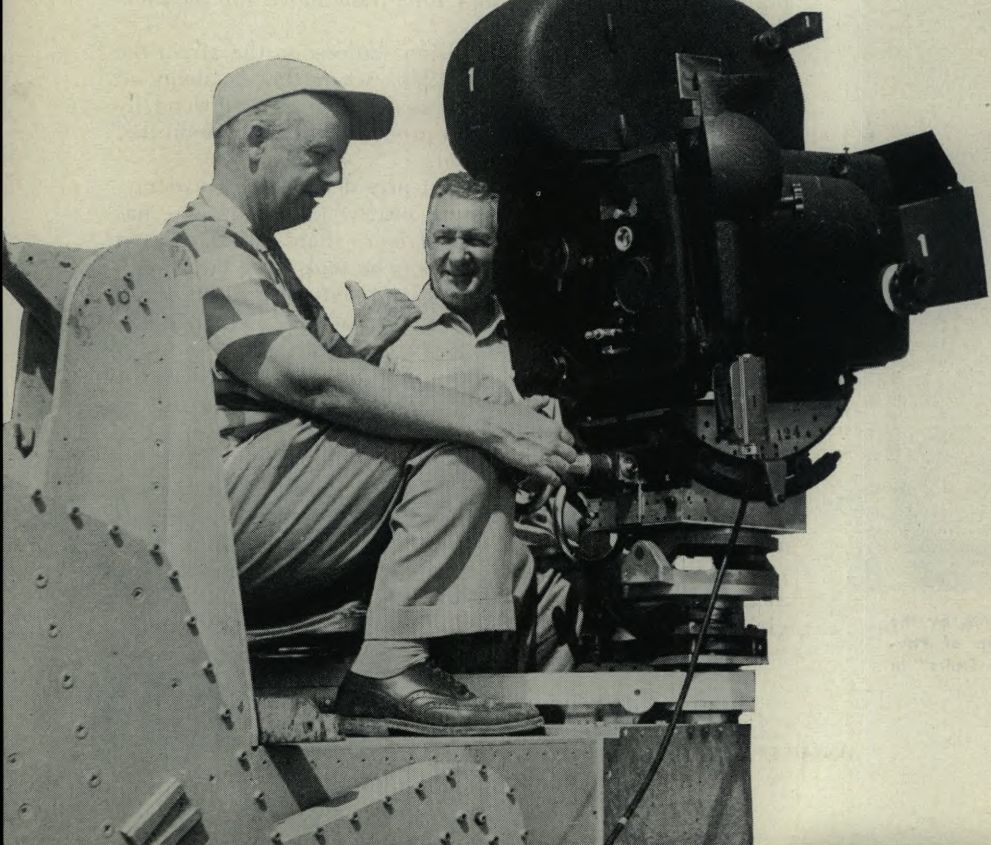
THE LAST FRAME of the last added scene of Rodgers & Hammerstein's "Oklahoma!" had just been shot by director of photography Robert Surtees, A.S.C. The giant Todd-AO 65mm cameras had been packed away in the M-G-M camera department; and the last-lap frenzy of editing, dubbing and printing was going full steam ahead to insure the summer release of this record-breaking stage musical in a totally new screen format.

Lunching with Surtees in the M-G-M commissary, I asked him: "Now that you've finished the picture, what problems, if any, did you encounter in shooting the ultra-wide screen Todd-AO format that you have not normally encountered when shooting pictures in conventional ratios?

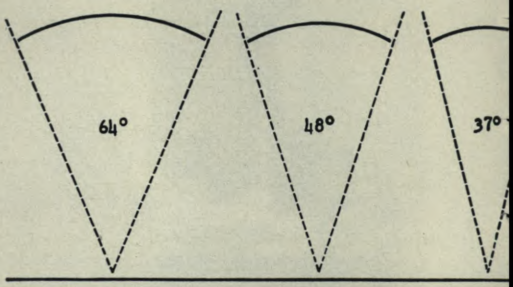
"One of our greatest problems, perhaps, was that we had too much of a good thing," Surtees said. "By that I mean there is so much to look at in the huge Todd-AO frame that at times we were forced to use special measures to focus audience attention on the one single element that was important. We would do this sometimes by concentrating light on a particular subject, letting the rest of the composition fall off in intensity. Or we would frame the composition with a foreground object that would effectively cut off excess area at the sides of the frame. We almost never centered anyone in a scene; the overall composition was important, and we let the actors move within it rather than pan the camera to keep them centered. When we did pan, we were usually behind the subject instead of centering or leading. This technique was arrived at in advance following much talk, experimentation and plotting of action on a model of the farm set we used."

Discussing the new method further, Surtees observed: "The Todd-AO process is 'good theatre.' It has a showmanship quality all its own and it's a very exciting medium for telling a story. Optically, Todd-AO is a very superior picture process. It offers crisp definition in color such as never obtained before and its picture proportions (from the cameraman's standpoint) are ideal—better than the usual 3-to-4 ratio or the elongated frame of anamorphic systems.

"The superior screen quality of Todd-AO is easily under-

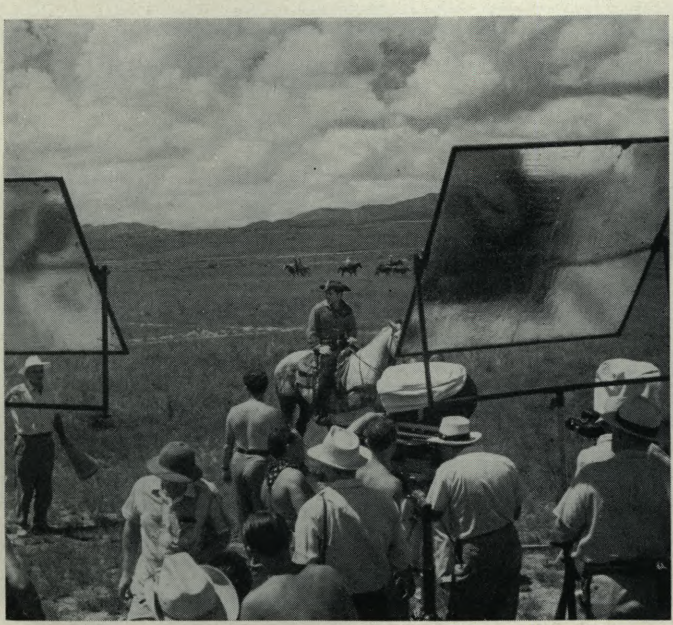


ROBERT SURTEES, ASC, "Oscar" winning director of photography (left) behind the Todd-AO camera on location in Arizona. "When we started 'Oklahoma'," said Surtees, "we had no precedents to go by—no technical data to refer to. We felt like real pioneers!"



TODD-AO camera lenses are classified according to angle of coverage, instead of focal length, as with other motion picture camera lenses. Above are, from left to right, the 37°, 64°, and 48° lenses. Diagram below shows comparative angles of coverage of the three lenses.

AUTHENTIC format of the Todd-AO picture area on the screen is represented by this picture of one of the major exterior sets which the Rodgers & Hammerstein company erected near Nogales, Arizona for major scenes in "Oklahoma!"



HERE THE Todd-AO camera and a CinemaScope camera work side by side in one of the few instances where both were able to shoot the same scene simultaneously. Reflectors instead of arc lamps supply fill light for scenes of cattle roundup.

MUSICAL NUMBER staged in the barnyard for "Oklahoma!" In scenes of this kind, it was necessary to shun as much as possible direct across-the-screen action to avoid blurr. Instead. such action was staged coming toward camera either directly or on an angle.

stood when one considers that Todd-AO 65mm film is invariably projected at the same distance as 35mm. The ratio of blowup is therefore not as great, and better definition results."

In the very beginning, Surtees said, they made exhaustive tests of the Todd-AO cameras and lenses; the company spent several months in preparation before starting to shoot the production. It was during this interval that the system's good points and its few limitations were discovered and a basic shooting procedure established. "Old rules were tossed out the window and new ideas tried," said Surtees.

One of Rodgers & Hammerstein's initial decisions was to shoot the production in CinemaScope as well as Todd-AO. This suggested that each scene would be shot with the two cameras working virtually side by side. Actually, Surtees said, it turned out that only about ten scenes in the whole production were shot that way. The ultra-wide scope of the Todd-AO lenses rarely would permit the CinemaScope camera to work alongside it. The plan was changed very

(Continued on Page 243)

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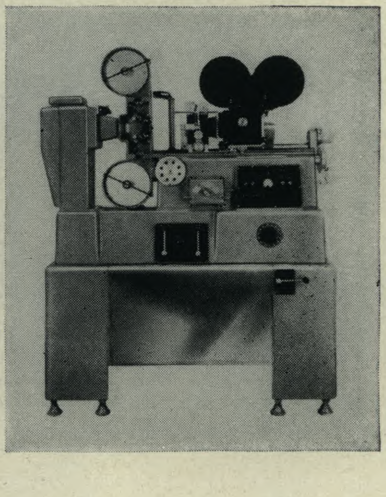

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Suiting The Lens To The Scene

Know your lenses—their capabilities and their limitations—in order to employ them properly in cinematography.

By CHARLES LORING

MOTION PICTURE LENSES, like the tools of any trade, produce best results when used correctly. That is why, in the photography of anything more advanced than the simplest of home movies, it is important that the proper lens be selected to bring out the best in the scene to be photographed.

The selection of a lens to suit the scene (all other things being equal) is mostly a matter of *focal length,* a term which is defined as meaning *the distance from the optical center of the lens to the film plane of the camera.*

The novice 16mm cameraman is confronted with a bewildering variety of lenses in a wide range of focal lengths. Generally speaking, these fall into three categories: wide-angle lenses, standard lenses and telephotos. For 16mm cameras the most popular wide-angle lens is a 15mm. The standard lens is 1-inch or 25mm. The telephotos start at 2 inches and range up to 16 inches focal length—although the most widely used lengths are 63mm, 4-inch and 6-inch.

In order to understand how each of these lenses should be used for the optimum result, it is necessary to review certain basic optical characteristics which include or depend upon focal length:

1. *Depth of field*—Defined as "the distance from the nearest to the farthest object in acceptable focus when the lens focus scale is set at a given distance." The term "acceptable," in this case, is open to certain scientific debate, but it has been arbitrarily settled through the compilation of mathematical depth of field tables for each lens. These charts are available in card or handbook form at most movie supply dealers.

It is an axiom that the longer the focal length of a lens, the narrower its depth of field. The smaller the aperture, the greater the depth of field. When a lens is focused on a distant object the depth of field is greater than when the same lens is focused on a closer object.

2. *Hyperfocal Distance*—Defined as "the closest plane in acceptable focus when a lens focus scale is set at 'infinity'." Setting the lens scale at the hyperfocal distance results in a maximum depth of field, for it is a law of optics that everything from one-half that distance to infinity will be acceptably sharp.

The hyperfocal distance varies with the focal length of the lens and the aperture used. The larger the lens or the wider the aperture, the more distant from the lens will fall the hyperfocal distance, resulting in a narrower depth of field. Hyperfocal distance scales are also available in card or handbook form.

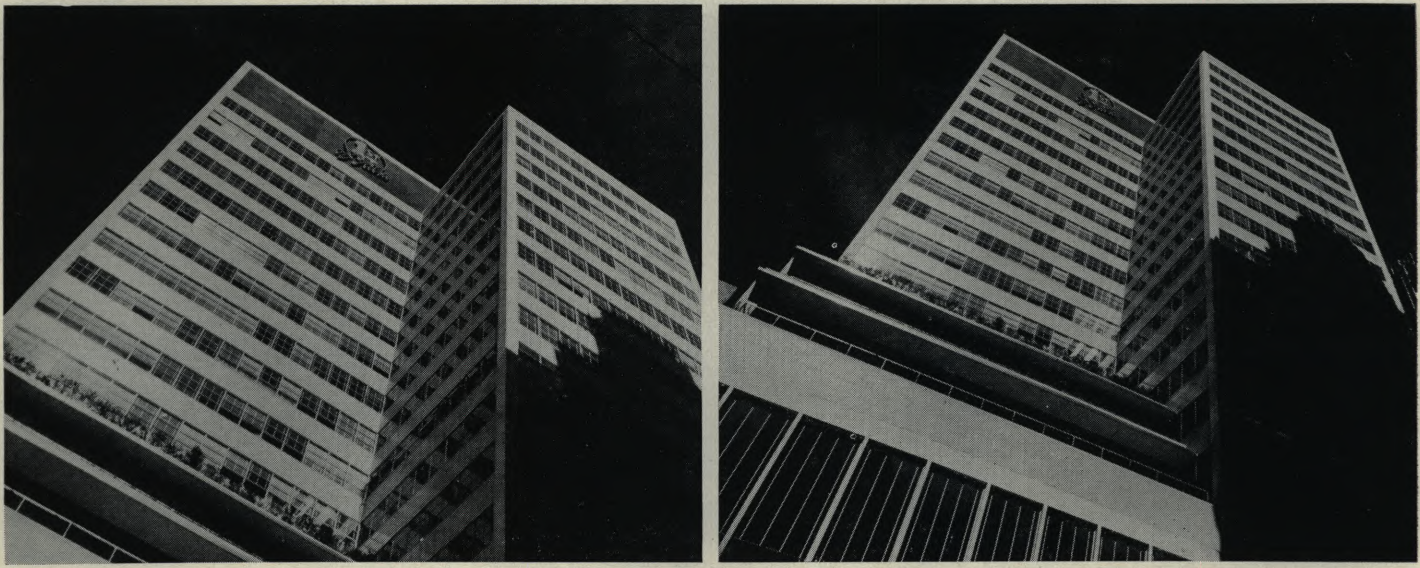
The American Cinematographer handbook contains depth of field and hyperfocal distance scales for all the most popular focal lengths of lenses for 16mm and 35mm photography.

3. Image size and angle of coverage vary with the focal length of the lens. The longer the lens, the greater the image size and the narrower the angle of view.

On the basis of focal length we have divided lenses into three general categories. The wide-angle lenses, the standard lenses and the telephotos. Let us examine each of these in order to establish their characteristics and see how each may best be applied in shooting certain scenes.

The Standard Lens: The 1-inch or 25mm lens is considered the standard lens for 16mm motion picture photogra-

(Continued on Page 238)



LENSES of different focal length produce not only a difference in image size, but an altered rendition of perspective as well. The angle shot (left, above) of a building, photographed with a standard one-inch lens, forms an interesting compositional pattern; but the effect is even more dramatic when photographed with a 15mm wide-angle lens (right). Here, the greater image size not only gives more scope to the scene, but the exaggerated perspective of the converging lines creates an especially forceful composition.

Experiments With The Camera

Norman McLaren has exploited every known cinematic trick, and has invented a few himself.

By HAROLD BENSON

IN THE REALM of exploratory cinematography few, perhaps, have attained the prominence of Norman McLaren. His very first motion picture film was made without a camera—an accomplishment which was described in my article in the January issue. Sometime later, however, he turned to the more orthodox approach and produced "Seven Till Five," which he describes as a "formalized documentary of a day's activity at Glasgow Art School."

However, McLaren could never be satisfied with conventional camerawork, and the title of his next film, "Camera Makes Whoopee," was appropriate. This 600-ft. 16mm production exploited all the trick effects he could think of, using a school Christmas ball as a central theme. Before leaving Glasgow he made "Hell Unltd.," an anti-war film which used both straightforward photography and his own cameraless animation technique.

McLaren's first films for the General Post Office Unit in London were documentaries, but he found scope for his passion for animation and trickery in "Mony A Pickle," a fantasy publicising the Post Office savings bank. In this very short (200 ft.) film he told a simple story of animating household furniture by single frame methods. In 1939 he made "The Obedient Flame," a film on cooking gas, again using a combination of techniques with and without a camera.

During McLaren's New York period and his early days with the National Film Board of Canada he ignored cameras almost completely, concentrating on experiments in direct paint-on-film treatments. But in 1945 he made "C'Est L'Aviron," one of the French-Canadian folk song series made under the collective title "Chants Populaires." For "C'Est L'Aviron" McLaren returned to the camera—the animation camera, of course.

He utilized the zoom stand, the device which allows the camera to approach or to recede from the animation table, in such a way that he created a very real sensation of a third dimension. Spectators feel that they are passengers in a canoe gliding down a great river. The illusion was obtained in the following way.

Several hundred paintings, each about eighteen inches by twenty-four, were made with white paint upon black cards. Only one plate of the landscape was painted on each of the cards. As each card lay on the animation table it was filmed with the camera moving towards it on the zoom stand. Then the film was wound back a little in the camera so that the next painting was superimposed over the end of the first.

This was done throughout the whole length of the film, resulting in an optically achieved multiplane effect. McLaren called this animation method "a continual series of overlapping staggered zooms." Finally he superimposed images of the prow of the canoe optically. "In C'Est L'Aviron," he says, "there were often as many as six or seven separate exposures made on the same negative." When the National Film Board later produced a prize-winning film on cancer, the director pointed out that its animation sequences would have been impossible but for McLaren's experiments in "C'Est L'Aviron."

"Keep Your Mouth Shut," yet another mixture of cameraless technique and photography, was made by McLaren in the same year, and in 1946 he tried a further experiment in camerawork. Working on "La-Haut Sur Ces Montagnes," another in the "Chants Populaires" series, he evolved what he calls the "pastel method."

Describing the basic idea, McLaren wrote in Documentary Film News, "In doing oil paintings myself, and in watching other painters at their canvases, it often seemed to me that the evolution . . . from its virgin state to (in my own case) its soiled and battered conclusion was more interesting than the conclusion itself. Why not, therefore, consciously switch the focus-point of all the effort from the end condition and spread it over the whole process? In other words, do a painting, but put the emphasis upon the doing rather than the painting—on the process rather than on the end-product."

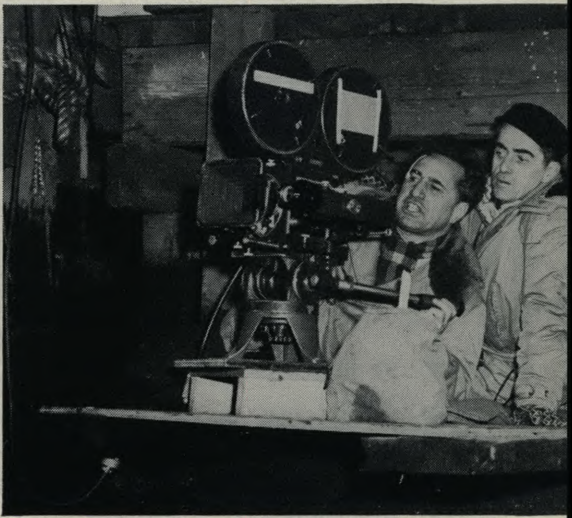
Watching the painting grow and change provided such a fascinating film that McLaren produced "A Little Phantasy On A 19th Century Painting" (also known as "Isle Of The Dead") and "La Poulette Grise" by the same method. This is how he described the technique of the latter, again in Documentary Film News.

(Continued on Page 230)

DURING HIS early days with National Film Board of Canada, Norman McLaren ignored cameras almost completely, concentrating on experiments in direct paint-on-film treatments. The Moviola was an important adjunct in the visualization of his film images.

Bad-weather scenes in "On the Waterfront" are authentic! Location shooting on Type 926 "Superior" 2 during night snowstorms was tough on cameramen — great for atmosphere.

Boris Kaufman, ASC, Director of Photography, is the man responsible for the outstanding cinematography in "On the Waterfront."



Director Elia Kazan and Director of Photography Boris Kaufman, ASC, work under cover of a dock on the Hoboken, N. J., waterfront.

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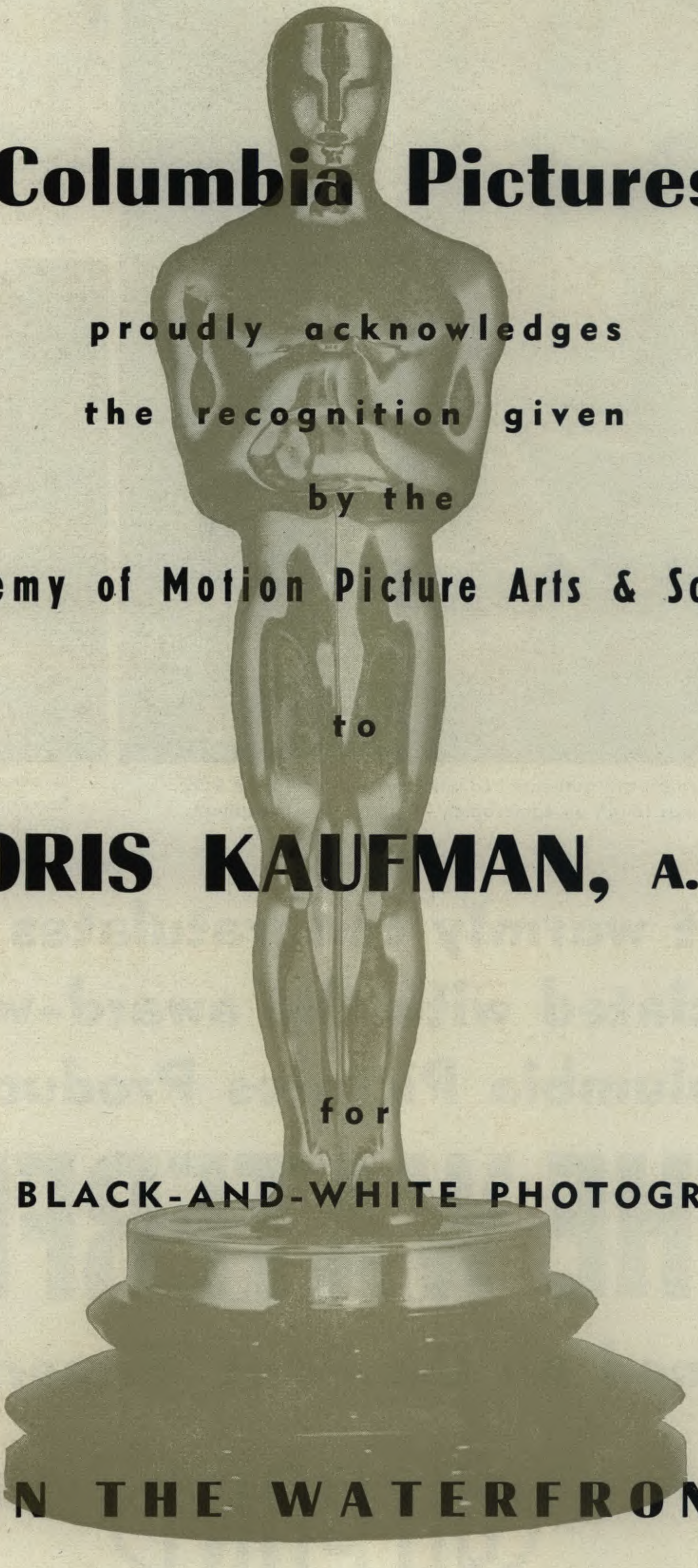

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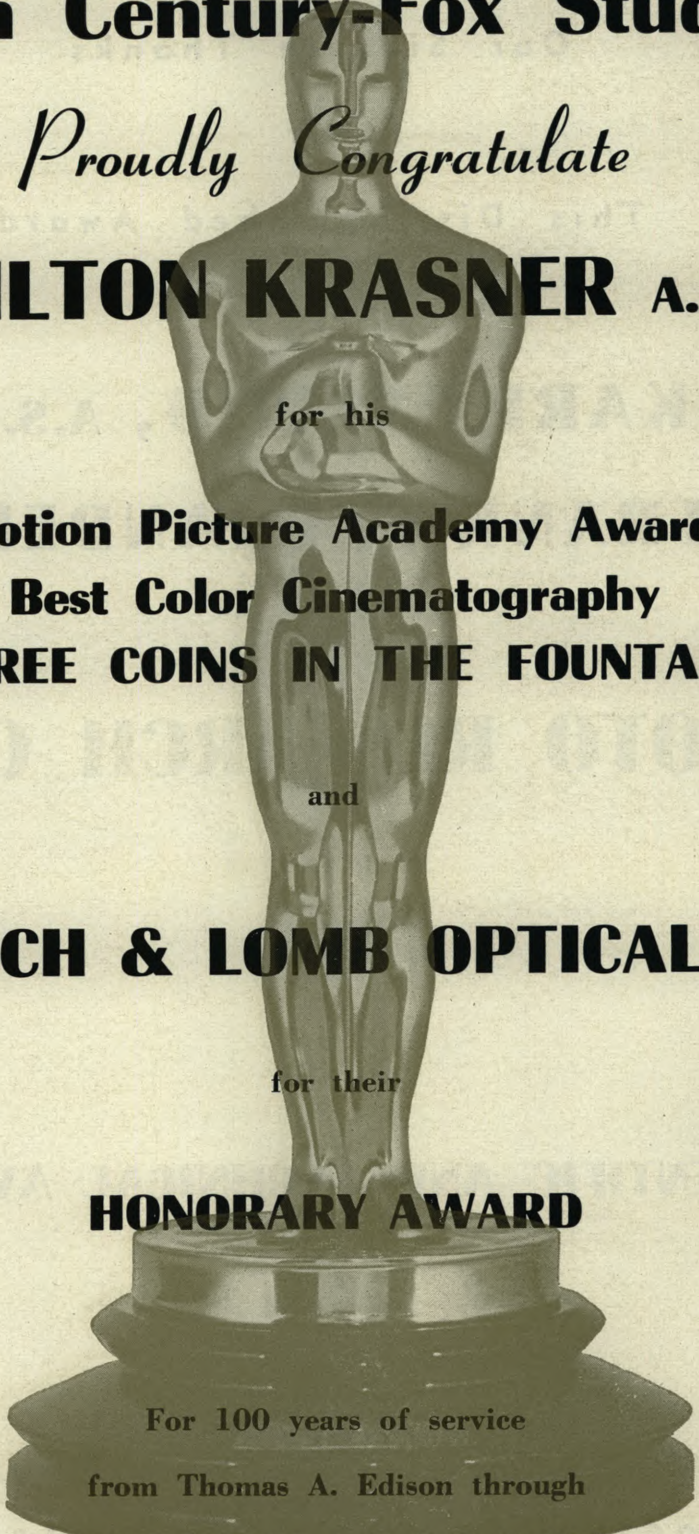

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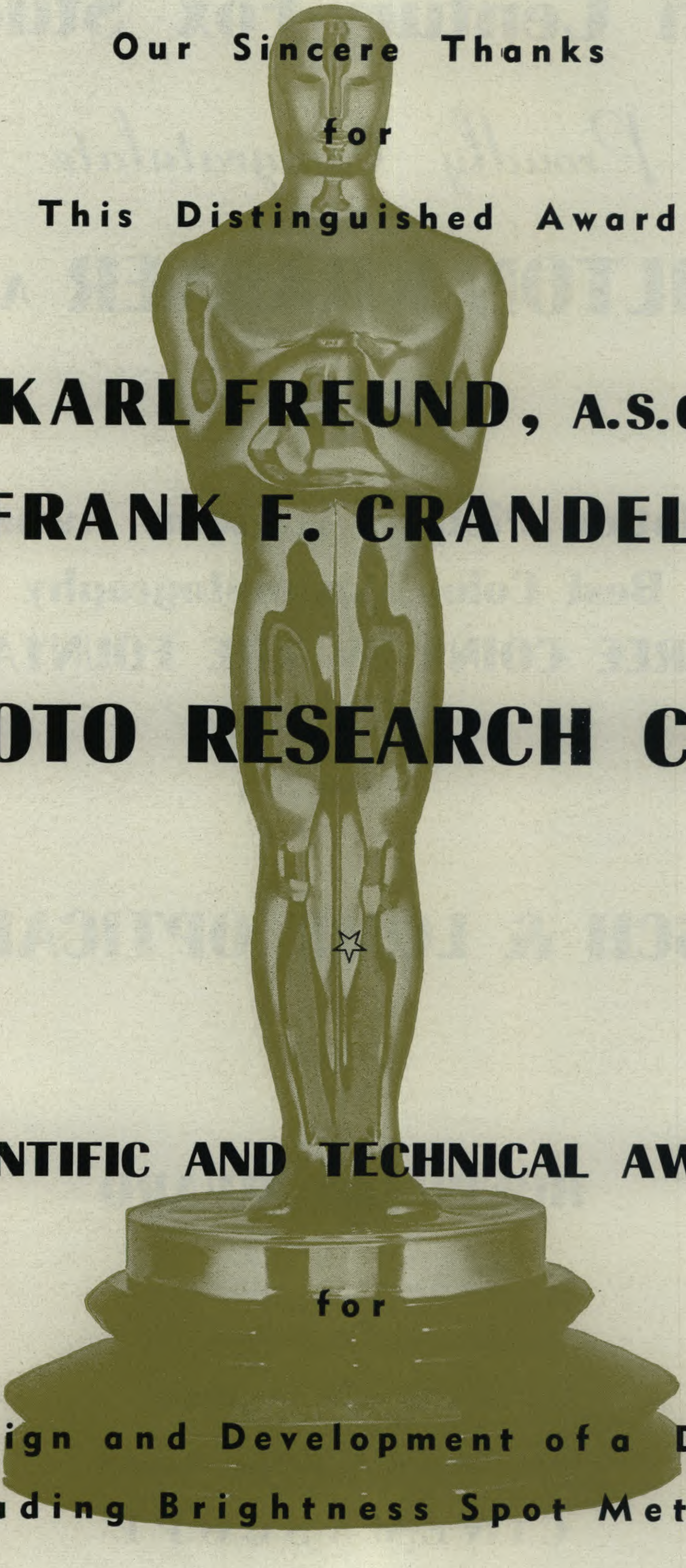

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JOSEPH BIROC, ASC — "Down Three Dark Streets"
GEORGE FOLSEY, ASC — "Executive Suite"
ELLIS CARTER, ASC — "Human Jungle"
ERIC CROSS — "Little Kidnappers"
BORIS KAUFMAN, ASC — "On the Waterfront"
JOHN F. SEITZ, ASC — "Rogue Cop"
CHARLES B. LANG, JR., ASC — "Sabrina"
CHARLES G. CLARKE, ASC — "Suddenly"
SID HICKOX, ASC — "Them"

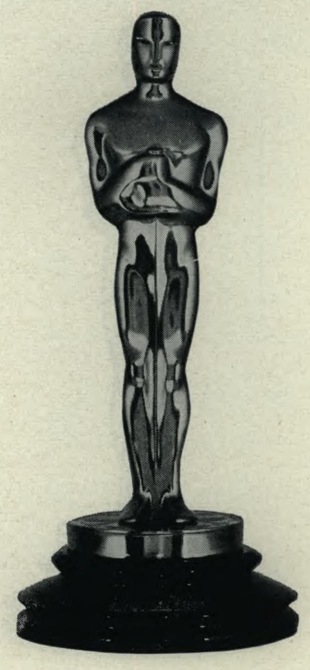
Nominees

JOHN F. WARREN — "Country Girl"
GEORGE FOLSEY, ASC — "Executive Suite"
BORIS KAUFMAN, ASC — "On the Waterfront"
JOHN SEITZ, ASC — "Rogue Cop"
CHARLES B. LANG, JR., ASC — "Sabrina"

Academy Award Winner

"On The Waterfront"

BORIS KAUFMAN, ASC
Director of Photography



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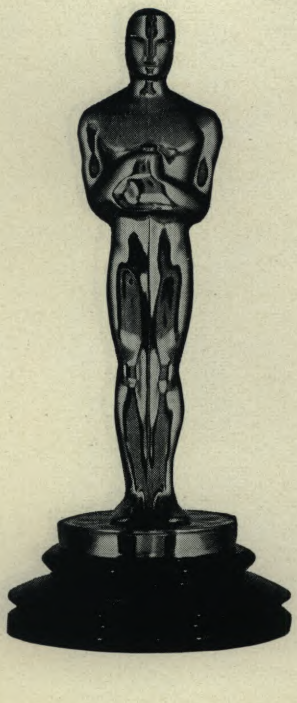

Candidates Submitted For Nomination

JOSEPH RUTTENBERG, ASC — "Brigadoon"
LEON SHAMROY, ASC — "The Egyptian"
JOE MACDONALD, ASC — "Broken Lance"
ARCHIE STOUT, ASC — "The High and the Mighty"
ROBERT BURKS, ASC — "Rear Window"
GEORGE FOLSEY, ASC — "Seven Brides For Seven Brothers"
WILLIAM V. SKALL, ASC — "The Silver Chalice"
SAM LEAVITT, ASC — "A Star Is Born"
MILTON KRASNER, ASC — "Three Coins In The Fountain"
FRANK PLANER, ASC — "20,000 Leagues Under The Sea"

Nominees

LEON SHAMROY, ASC — "The Egyptian"
ROBERT BURKS, ASC — "The Rear Window"
GEORGE FOLSEY, ASC — "Seven Brides For Seven Brothers"
WILLIAM V. SKALL, ASC — "The Silver Chalice"
MILTON KRASNER, ASC — "Three Coins In The Fountain"

Academy Award Winner

"Three Coins In The Fountain"

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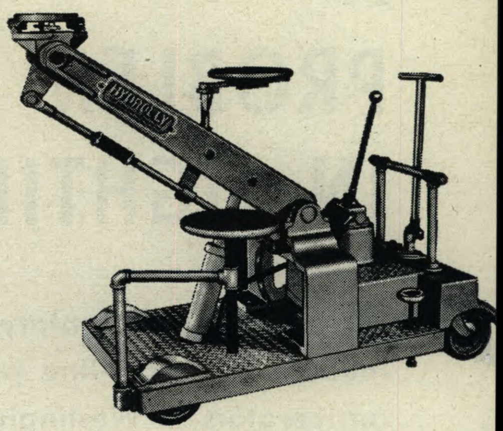

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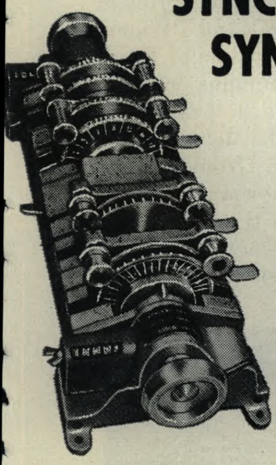

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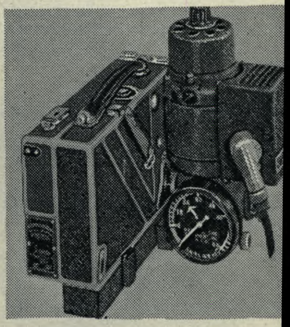

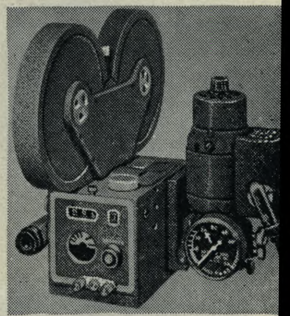

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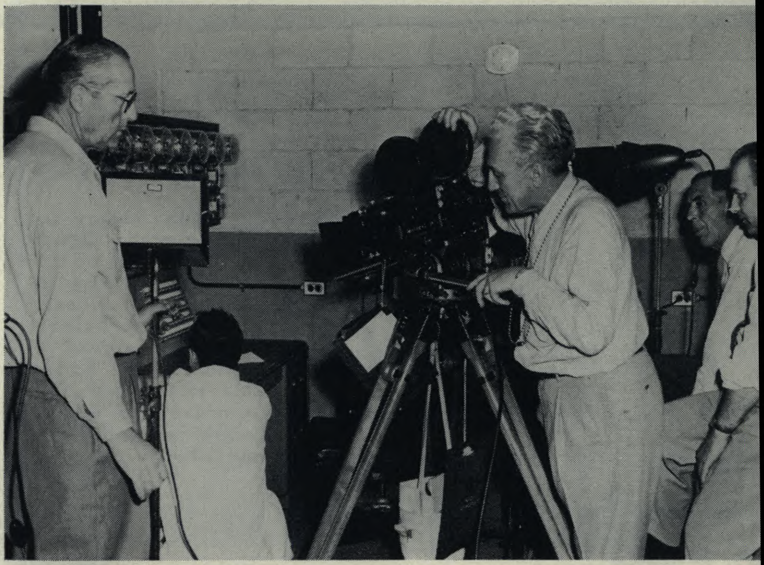
A PROBLEM IN LIGHTING

Shooting a documentary in color of modern assembly-line production of refrigerators in Westinghouse's giant new home appliance factory.

By ARTHUR ROWAN



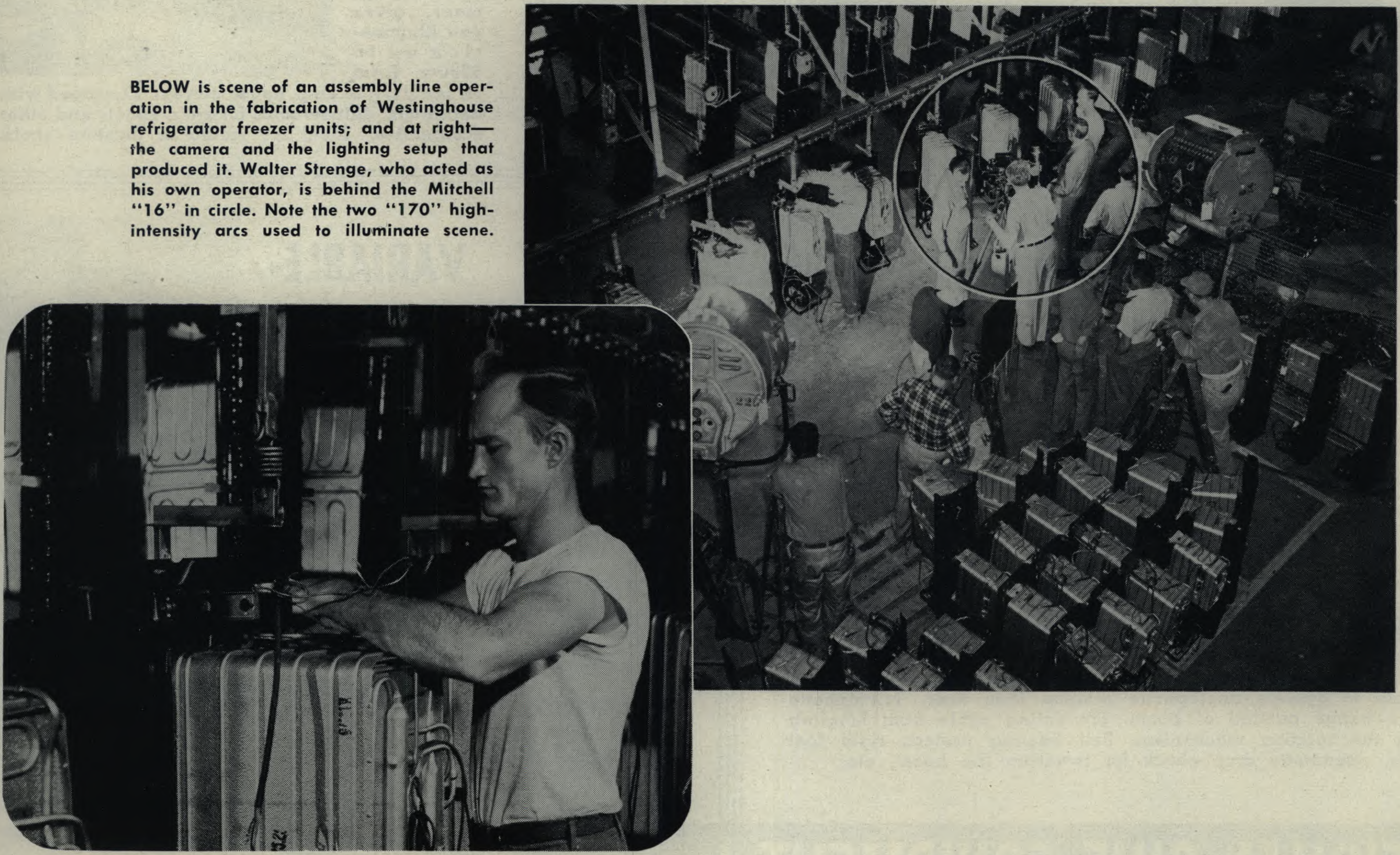
CLOSEUP of testing laboratory operation in the new Westinghouse appliance factory is being photographed here by director of photography Walter Strenge, A.S.C., using the Mitchell "16" camera.

One of the major problems which every cameraman faces in planning the photography of an on-location business film is that of lighting. Unlike when photographing a production on a conventional studio sound stage, where both the conditions and shooting practices are pretty much the same from picture to picture, each on-location assignment invariably presents unknown factors in the matter of total space to be lit, the power available for lighting—if any, and the amount of lighting equipment that must be brought in.

Such was the situation faced recently by Walter Strenge, A.S.C., when assigned by Roland Reed Productions, Hollywood, to photograph a 15-minute 16mm color production for Westinghouse Electric Company at its new plant in Columbus, Ohio. In between assignments of this kind, Strenge photographs the popular "My Little Margie" and "Waterfront" television film series, also produced by Roland Reed.

Westinghouse had just completed in Columbus what is regarded the largest single factory devoted to the production of home refrigerators. The assignment called for documenting the manufacture of Westinghouse refrigerators from the fabrication of metal components, through the assembly, finishing, testing, packing and shipping, and finally the installation of a refrigerator in the home of a typical American buyer.

Among the features that were to be emphasized in the film



BELOW is scene of an assembly line operation in the fabrication of Westinghouse refrigerator freezer units; and at right—the camera and the lighting setup that produced it. Walter Strenge, who acted as his own operator, is behind the Mitchell "16" in circle. Note the two "170" high-intensity arcs used to illuminate scene.

were details of the more important assembly line operations, and the extent of the modern assembly lines which are geared to turn out up to 4000 major appliances per day.

A preliminary survey of the plant revealed these facts: the one-story factory building extended almost a half a mile in length, its roof covering 45 acres; the plant contained four manufacturing aisles, each 200 feet wide and extending approximately 1500 feet, and led in a straight-line production pattern to the warehouse area; the daylight admitted through the windows was negligible for photography.

A careful check of power sources revealed that same was supplied by two 39.4 KV lines of the local power company, *but* that it would be more advantageous to provide portable generators to supply power for the lighting equipment that would be necessary for color photography.

A survey of lighting fixtures in the plant (which sometimes can supply a measure of photographic lighting) showed that forty different types of indoor and outdoor lighting fixtures are used; 400-watt and 1000-watt fluorescent mercury lamps are used in the high bay areas; offices and working areas are lighted to an intensity of 50 foot candles.

To provide a safe margin of photographic lighting for this assignment, Roland Reed Productions shipped the following equipment from Hollywood:

Six Brutes (225 amp. hi-intensity arcs).
Six Type 170's (150 amp. high intensity arcs).
Two Duarcs (35 amp. arc lamps).
Six Seniors (50-amp. incandescent spots with filters).
Twelve Skypans (with 50-amp. incand. lamps).
Eight Cinelites.
Two sets of Colortran lights.
175 pieces of feeder cable 100-ft. in length.
Eight 50-ft. plugging boxes.
Six 50-ft. 3-wire cables.
Twenty-four spiders (connecting blocks).
One 650-amp. gas generator.
One 1350-amp. gas generator.

Strenge's production crew, brought from Hollywood, consisted of 2 gaffers, 1 generator man, 6 electricians, 1 grip, and one assistant cameraman. Eight electricians and 2 grips were also hired through the local Union.

Strenge used a Mitchell 16mm camera and 16mm Commercial Kodachrome film. Holding the lighting to within the limits of the color temperature established for the film was achieved through use of the Photo Research Corp. Spectra Color Temperature meter, and appropriate filters placed on the camera lens. Color temperature ranged from 3200 to as high as 6000 degrees Kelvin. A light level of 1100 foot candles, established for most interior shots, enabled him to work with a lens stop of f/2.8.

Before starting actual production, a number of tests were shot, developed and printed by Consolidated Film Industries laboratory, and air-mailed to Strenge for study—a safety measure that insured good color quality in the film as well as giving the answers to several ticklish lighting problems.

Industrial plants are notably lacking in color. So, this being a color production, Strenge was challenged to inject something in the way of contrast and color to offset the monotones and at the same time highlight compositions. He resorted to a trick he once employed in shooting another industrial film, where a similar situation was encountered. Obtaining a number of metal trash barrels, he had them painted in various colors and spotted prominently in the longer shots. In addition to lending color to the scene, they also had a tendency to give depth to the composition by suggesting a multiple of planes. Colored fire extinguishers were also used in this manner, being re-positioned in a scene where color relief or accent was required.

The accompanying photos show some of the factory

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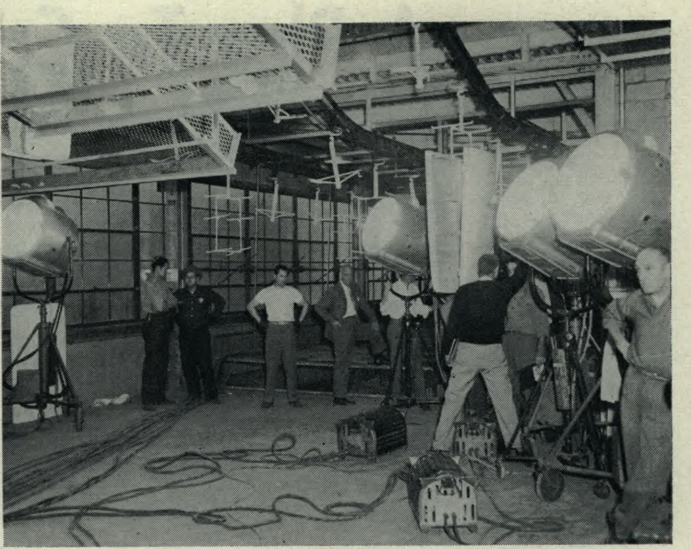
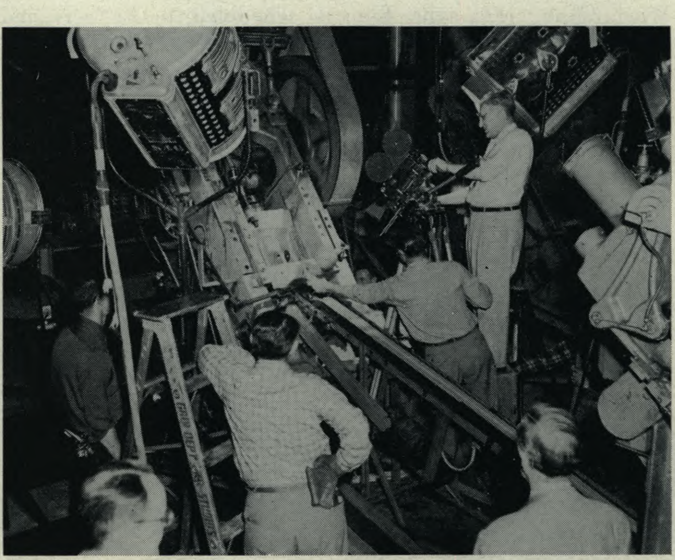
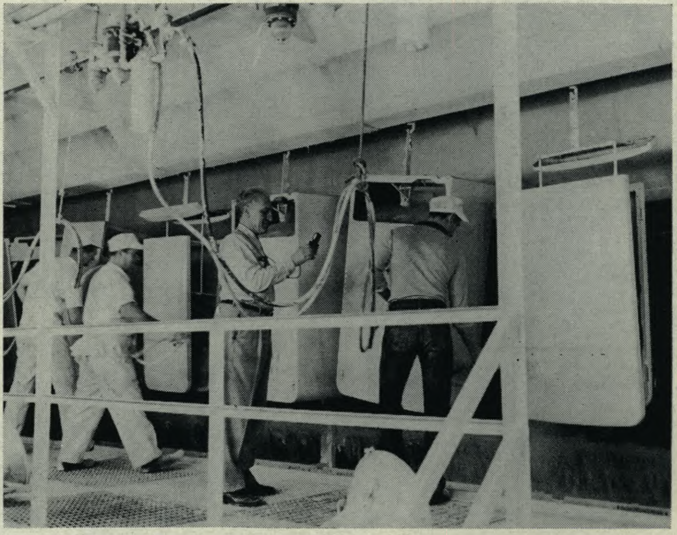


THANKS to a battery of six powerful Brute arcs, brought from Hollywood, there was ample illumination for every factory interior.



WALTER STRENGE lines up the camera for a closeup of a metal stamping operation. Here light is supplied by two "170" arc units.



PAINTING ROOM was only place where open flame arc lamps could not be used for illumination. Instead, powerful incandescent lamps were used to light this scene. Director of photography Strenge, center, is taking a meter reading of the light.

A Plea To Congress Via Film

How a 75-day deadline was met by Forney Films, Inc., assigned to produce an "argument on film" favoring the development of one of the West's great potential water and power sources.

By C. M. HOWE

President Forney Films, Inc., Ft. Collins, Colorado

ONE OF THE more unique applications of motion pictures, perhaps, is the factual presentation before Congress of a vital project proposal up for its consideration. This was the purpose behind "Birth of a Basin," which our company, Forney Films, produced for the Upper Colorado River Basin Commission. In addition to the showing in Washington, D.C., the film is scheduled to be screened throughout the nation and is also to be televised.

The Upper Colorado River Basin covers roughly 110,000 square miles and encompasses parts of the states of Wyoming, Utah, Colorado, New Mexico, and Arizona. The proposed basin project includes plans for six major dams and involves fifteen subsidiary or participating projects. It is a billion-and-a-half dollar undertaking that will make TVA and the Hoover and Bonneville dams look small by comparison. The commission is composed of representatives from the Upper Colorado River Basin states appointed by their respective State Governors; they are devoted to the task of getting the project passed by the 84th session of Congress. At stake is the development of the West—rich in undeveloped resources, and badly in need of water and power.

When our company's representative brought us the production contract on November 1st, 1954, the foregoing facts plus 20,000 pages of six-point type consisting of the transcript of the House and Senate hearings of the 83rd

FORNEY FILMS INC.
Producers of Motion Pictures for Education • Industry

Congress were all we had to start with. When we asked about the date set for delivery of the finished film, our man said simply, "The 14th of January."

"1956?", our production man asked. When he was told "January 14, 1955," tops were blown all over the place and everybody went to man their stations. The eight-hour working day was discarded; wives of staff members were informed there would be a late Christmas . . . and away we went!

Six days and nights later a script was ready for presentation to the sponsoring Commission. Meantime, our camera crews already were scouting location sites and shooting footage that could be used in the production. The author and sound man Jerry Tunnell set out in the company's Chevy station wagon with the following production equipment: a motor-driven Auricon 16mm sound camera; a Cine Special plus extra magazines; a Bolex H-16 for use in hard-to-get-at location sites; and a Magnafilm portable synchronous 16mm tape recorder plus necessary accessories.

Camera accessories included one-, two-, and six-inch Wollensak lenses, a one-inch and a wide-angle Ektar, and a Pan Cinor zoom lens; three tripods; a camera dolly; one reflector; and a Norwood and a G-E exposure meter.

First day out, we photographed the Seedskadee dam site, also core drilling operations, grazing sheep, and the land itself. We were shooting scenes for a picture of dams and water that existed only in the minds of a few men who were dedicated to the development of the West. We had as a guide only a brief outline of script that had not yet been approved. We were gathering footage for a film that didn't even have a tentative title.

Testimonials of native westerners could have a terrific impact in a picture of this kind, so using the sound camera and tape recorder, we secured lip-sync shots of farmers and men in western industry as they stated their views on the need for development of the Basin project.

Leaving Wyoming, we moved into Utah. To understand some of the problems that were encountered, consider that the proposed dam sites in the Basin project are all practically inaccessible at the present time except by boat. Steep canyon walls, rising in some places to 3,000 feet above the river, make it almost impossible to find a place where long stretches of the river can be viewed from above. This meant that shots of these sites had to be done by aerial photography.

Harold Doll took to the air in Forney Films' Beech "Bonanza" plane. Arriving at the location he shot the required footage from the air, using a Bell & Howell 16mm camera. Doll's aerial camera coverage included all the dams in the lower Colorado basin, from Hoover dam on down to the Gulf of California. Included also was a pictorial record of the canal and aqueduct system which brings water to Los Angeles and San Diego, and a comprehensive pictorial account of the agricultural development that has resulted from utilization of Colorado river water in the lower basin area. In all, cameraman Doll covered 27,000 miles by air, while we covered a mere 2,700 miles in our station wagon.

While Forney cameramen were at work in the field, another important phase of the production was receiving attention at our studio in Fort Collins. Here production manager Ed Hawkins was doing by animation process, what was impractical or impossible to do in conventional

(Continued on Page 233)

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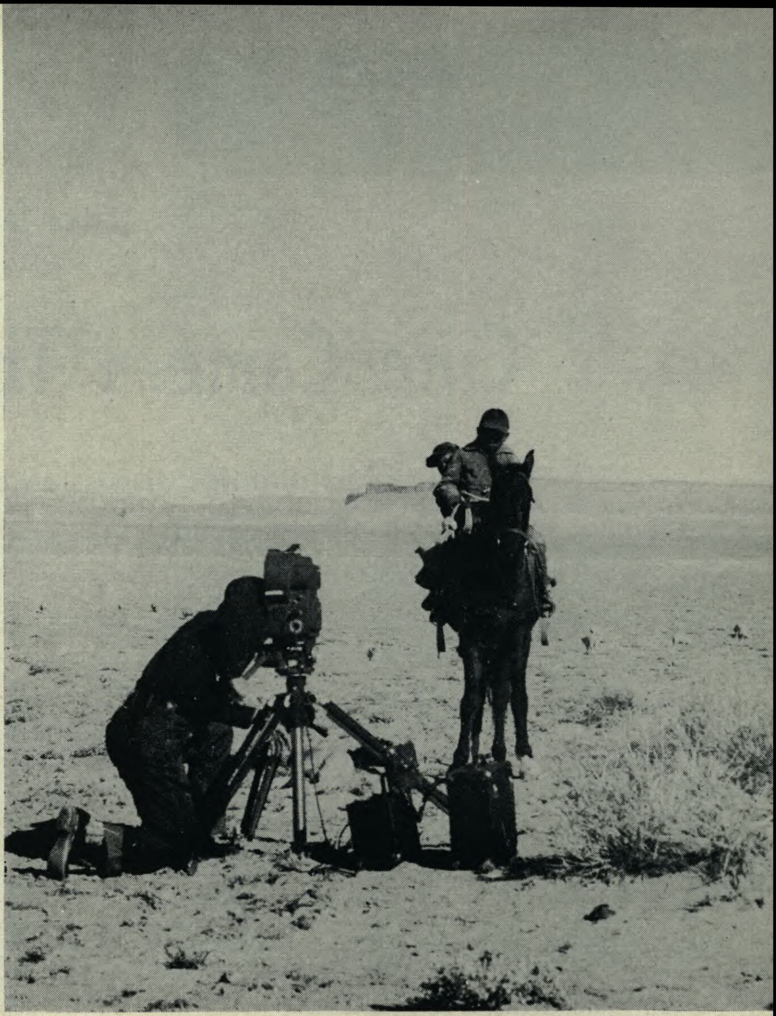
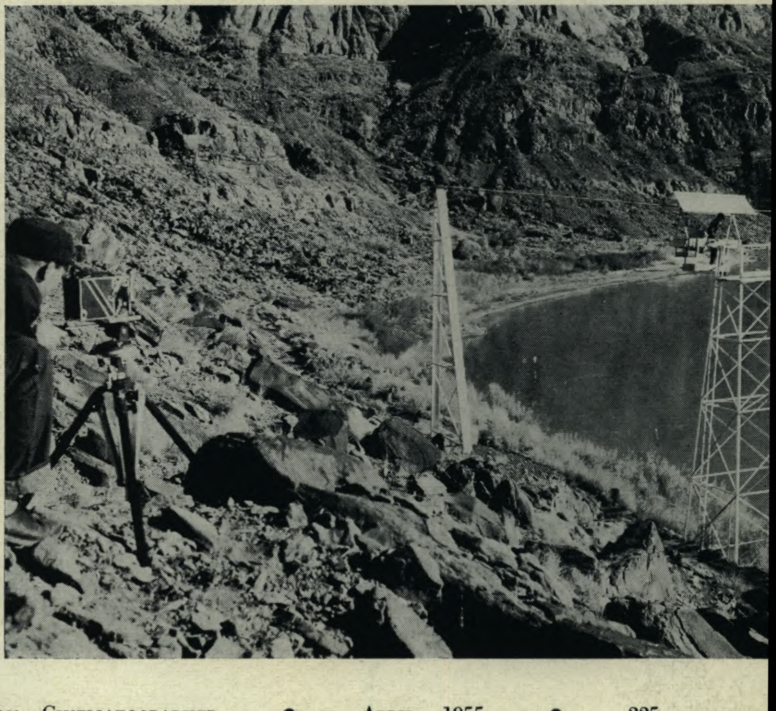
RUGGED AND DESOLATE character of area of proposed water conservation project is photographed by cameraman Max Howe. Jerry Tunnell checks the diminishing light with a meter.



GRAPHIC SHOTS of desolate, waterless region in which Navajo Indians live were made an important part of "Birth of a Basin." Navajos stand to gain by development of proposed project.

WHERE THE terrain was rough, the durable Cine Special proved a dependable camera. Here, scenes marking the division between upper and lower basin of the Colorado were shot.



Cine Camera Tricks

Continuing last month's discussion on how to make trick effects with your cine camera.

By CHARLES LORING

IN MY ARTICLE last month, I explained the place of camera tricks in cine films and pointed out the difference between camera tricks and special effects, and described some of the simple tricks which the average cine filmer can make without need for complicated equipment. In this article, some additional camera tricks will be described.

Your attention is called to the three illustrations on this page, which show three interesting setups for making trick shots with a cine camera. Fig. 1 shows a method for making title wipe-offs—the effect of one title "wiping off" the preceding title from the screen. Two title boards are involved plus two mirrors—one stationary, and one, double-surfaced, set to slide on a 45° angle. A wipeoff is accomplished as follows: Title card on 1st titleboard is photographed for required screen time, then sliding mirror at "A-B" is moved forward. This excludes first title from view of camera lens and at the same time brings into view title card on second title board, which is reflected into mirror "D" and thence to the dual-surfaced sliding mirror.

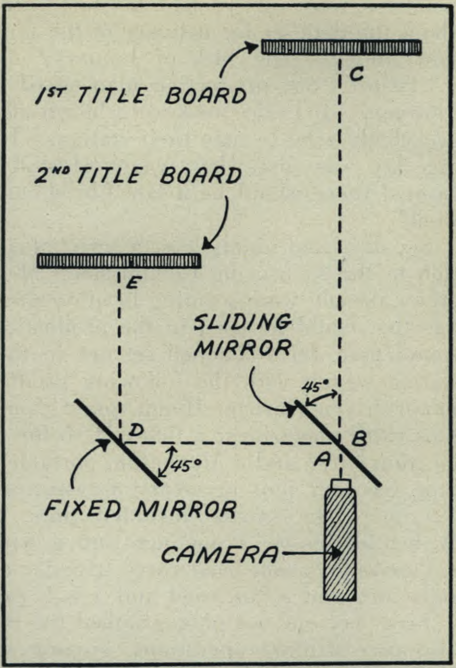


FIG. 1—Simple method for making wipe-off effects in titles—i.e., one title wiping off another. Involved are two title boards plus a single-surfaced and a dual-surfaced mirror. The latter slides diagonally to create the transition from one title to the other.

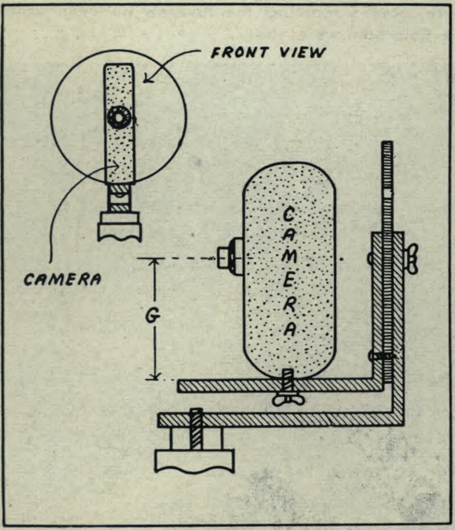


FIG. 2—Here's a simple gadget on which to mount a cine camera for "rocking" or "whirling" effects. It is set up on tripod, and sighting through finder is done through hole in the rotating disc back of the camera. Pivoting bolt and nut must be centered with camera lens to provide accurate rotary action of camera as it photographs the scene.

Figure 2 shows an easy-to-build rig for making a revolving camera shot, or a shot such as one would need to suggest a rocking boat, etc. The assembly consists of an L-shaped support on which the camera is mounted. This is attached to a disc which in turn is attached by wing-nut and bolt to a second L-shaped member that mounts directly on camera tripod. The important thing is to be sure that the distance from base of camera to center of lens, indicated at G, is considered when installing the wing-nut and bolt. This will insure that same will be placed on exact lens center and will insure camera rotating on lens axis.

The L-shaped members should be made of 1/8-inch strap iron. The disc may be of plywood; this should have a hole cut, as required by the particular camera used, to facilitate use of camera finder. A hole drilled and tapped in the larger L-shaped member for a 1/4-inch #20 machine screw will facilitate mounting the gadget on tripod.

Figure 3 shows a simple method of using a standard "typewriter" titler for making mask or split-stage shots in the absence of an elaborate camera matte box. With camera mounted on titler and the auxiliary lens removed (or folded out of way, as shown in illustration), the scene to be shot is centered in the title card area. The portion to be masked off is marked on edges of title card frame and black paper affixed with scotch tape, as shown. After the initial stage of the shot is made, the mask is removed and the former open area is then masked in a similar manner and camera now focused on the scene or subject that is to appear in the upper part of the picture frame.

The picture area, represented by the title card frame, may be masked off vertically, diagonally, horizontally, or in any pattern or design that suits the filmer's needs.

A precaution, to prevent unnecessary light striking the masking paper, is to

(Continued on Page 240)

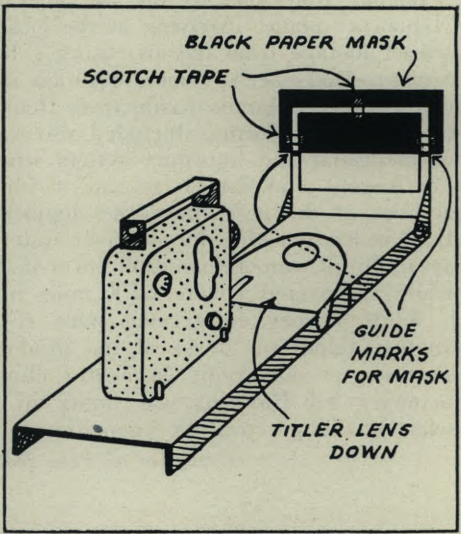
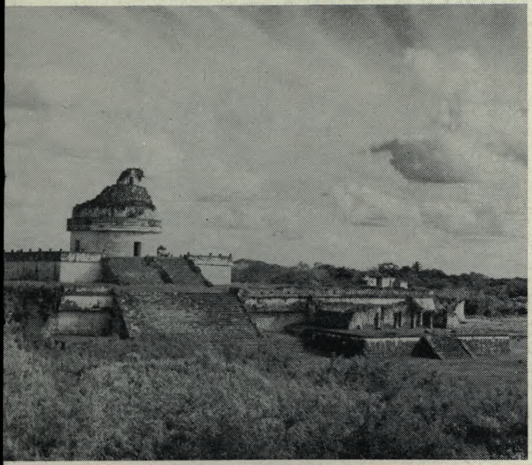


FIG. 3—Split-stage shots can be made easily using an ordinary titler having an "open" title card holder. The auxiliary lens is lowered or removed entirely. Scene is shot through title card frame, with the desired portion masked off by black paper attached with scotch tape. Masking can be horizontal, vertical, diagonal, etc., as desired.



THIS WAS Pablito's playground — the ancient ruins of the Mayas in Yucatan, Mexico. Here we filmed Pablito at play, made him the central character of our 16mm color fiilm.

Our Movie On TV

It started out simply as a planned documentary of a day in the life of a rural Mexican boy.

By CLIFFORD HARRINGTON

A little Indian boy, the ruins of an ancient Mayan civilization and a Yucatan jungle were the pictorial materials from which our 16mm color film, "Pablito's Playground" was woven. This eight-minute film was televised recently by station KPIX-TV, San Francisco.

Our star was Jaime, an eight-year old youngster whom we found living near the Mayan ruins of Chichen-Itza on the Yucatan peninsula of Mexico. We later dubbed him Pablito for film purposes. Although he was eager to help us, he was never quite sure what we were attempting to do. The little fellow had a vague idea of what motion pictures were, but he had never seen one.

We selected Jaime as our star from a group of several children we had been considering as subjects. He proved to be the most intelligent and cooperative. And he could work for several hours at a time without becoming restless or bored, as some children do.

We began planning our production by observing Jaime's daily life. We found that each weekday he attended classes in a little one-room school building. But after school and on weekends, as do most other youngsters the world over, he played near his home. His playground, however, was the neighboring jungle and the acres of Mayan ruins. We decided to film this latter phase of his activities.

Our equipment was meager—a 16mm Victor model 4 camera with a 1-inch f/2.5 lens and a 3-inch f/4.5 telephoto, an exposure meter, a tripod and five rolls of color film—all that we could afford. With only five hundred feet of film, we had to make each foot count.

With these limitations in mind we prepared a shooting script. We decided at the outset to avoid any complicated plot and concentrate on picturing a typical afternoon in Jaime's life. Our plan was to prepare and use a script only as a guide in order that we might take advantage of any unusual incidents which might crop up. As it later developed, the unplanned sequences made up the bulk of our usable footage.

For example, in our wanderings on a jungle trail, we came upon a mother burro and her half grown baby. The animals were living in a semi-wild state and were difficult to approach, but Jaime succeeded in walking cautiously up to the baby and climbing aboard. The little beast at first was frightened, but being a typical burro he stood still. No amount of coaxing would make him move. Then, suddenly its mother started ambling down the trail. The baby walked several steps, bucked Jaime off and ran after her. This sequence would have been almost impossible to stage, and luckily I managed to capture it on film. The youngsters back in the United States enjoyed this part of the picture more than any other.

Our shooting procedure for the planned sequences began with an explanation to our young star of what we intended him to do. We would do one rehearsal, if we felt it was necessary, and then allow him to go through the bit in his own way. This provided for spontaneity and resulted in unexpected reactions from him. He had the knack of smiling or frowning at just the right moment to put the finishing touch to a sequence.

All communication with Jaime was carried on in Spanish by either Edward Welling, an entomologist from Ohio, who served as technical adviser, or Carol Miller, a California writer who helped prepare the script. Both of these young people had lived in Mexico for long periods of time and knew the temperament of the people, especially child-

(Continued on Page 232)

THE AUTHOR shoots a closeup of "Pablito" back-dropped by the ruins which are his normal every-day playground. The eight-year old "star" of our lm stands on a stone figure carved centuries ago by the ancient Mayas.

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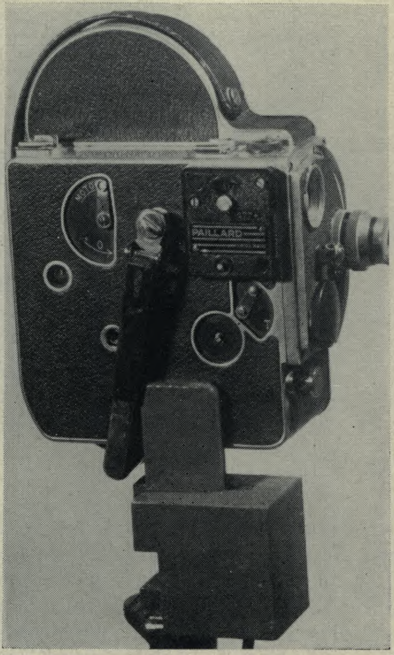
Time-lapse Cinematography

By CARROLL DUNNING



BOLEX camera with Animatic control.

THE TERM "time-lapse photography" invariably brings to mind movies showing a flower opening from bud to full bloom in a matter of seconds, or of a beautiful sunset in which the sun rapidly sinks behind an aura of ever-changing cloud patterns in a fraction of the actual time. However, this specialized type of cinematography, in which the motion picture camera makes a series of single exposures at pre-determined intervals, is now being applied with increasing regularity in many phases of industry.

It is a popular method of studying the various properties of metals—their stresses, torques and tensions. By artificial means corrosive effects are induced and photographed the meanwhile by time-lapse cinematography for study on the screen.

In medicine, time-lapse photography enables scientists to better study the growth of fungus, bacteria and cultures.

In the textile manufacturing industry, time-lapse photography has been employed to study the bleach-resistant quality of one fabric as contraasted with the rapid fading qualities of others.

An increasing number of American companies are engaged in major construction projects in foreign lands. Progress reports are furnished regularly on motion picture film exposed a single frame at a time. When screened, a single day's progress unfolds in a matter of a minute or two.

In a similar way, Walt Disney employed time-lapse cinematography to make a condensed movie record of the construction of his nine-million-dollar Disneyland project, being erected outside a Los Angeles suburb.

Disney engineers designed and constructed a battery of six 16mm cameras for time-lapse photography, and mounted them on towers erected at the most strategic spots overlooking the Disneyland site. The cameras were arranged in such a way as to cover each of the several streets. Time-lapse mechanisms set the cameras in motion once every 15 seconds during the day.

Other time-lapse shots were made by cameras mounted on tripods in the conventional manner, and the positions of these cameras were often changed daily if not several times a day. Because no fixed current source was available to operate the latter time-lapse mechanisms and camera motors, battery-operated Animatic Intervalometers, manufactured by Anson Research Company, North Hollywood, were employed to actuate the cameras in making the periodic single-frame exposures.

Some of the motion picture film thus obtained was made a part of a recent "Disneyland" television show.

In the production of analysis films for the study of players and techniques in various fields of sport, high-speed cinematography is giving way to the more economical time-lapse method. A two-hour grid game would normally require 4,300 feet of film, where covered by high-speed photography. With single frame exposures made at intervals of three seconds, the entire game would involve a mere 2400 single-frame exposures. Such a film affords both continuous and single-frame study by projection with good results. The manufacturer of the Animatic Intervalometer, incidentally, also makes a special projector for single-frame study of films of this type.

Frame-by-frame study of 16mm film exposed with time-lapse controlled cameras is finding increasing favor in many fields. It has been applied in the study of highway traffic, recording cars with smog-producing exhausts, and in recording evidence of cars which persist in crossing the middle line where such is not permitted.

Gas station and suburb store locations are now selected on the basis of pictorial studies made of prevailing traffic by means of 16mm cameras and time-lapse exposure controls. It has been found that such films, studied frame by frame, give more detailed information with less time required for screening than conventional motion pictures. **END**

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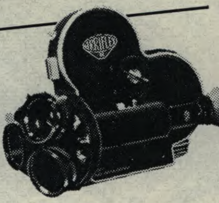

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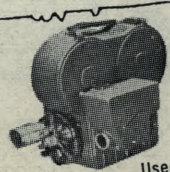

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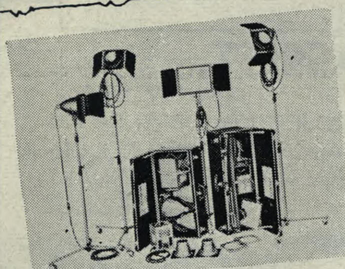

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EXPERIMENTS WITH CAMERA

(Continued from Page 214)

"I stuck a bit of cardboard about eighteen inches by twenty-four upon a wall, placed rigidly in front of it a tripod and camera loaded with color film. To avoid reflection and waiting-to-dry trouble, I used chalks and pastel rather than paint.

"The picture then grew in the normal way that any still painting grows, being evolved from moment to moment, and each stage being very dependent on the stage before it. About every quarter of an hour the evolution was recorded on the film mainly by short, contiguous dissolves. For three weeks the surface of this one bit of cardboard metamorphosed itself in and out of a series of henly images, and at the end of it all, all I had was one much worn bit of cardboard with an unimpressive chalk drawing on it, and 400 feet of exposed film in the camera. In a sense the film was the by-product of doing a painting.

"Of course the sound track had to be marked up first and the dope sheet made out in much the same way as for the hand-drawn technique, but once again the creative part of the job happened in one and only one concentrated binge, unhampered by technical headaches and frustrations. Also of importance was the fact that here again the moment evolved in its natural sequence, and as a result I had a chance to improvise everything at the moment of shooting.

"As this particular technique lent itself more readily to creating visual change rather than to action (side to side, and to and fro displacement of image on the screen), I intentionally avoided the use of action, partly because it suited the theme, and partly out of curiosity to see if change in itself could be a strong enough cinematic factor to sustain interest.

"The technique also invited me to take chiaroscuro out of its usual role as a dead element in the decor of animated films, and put it to work as the foremost factor with a life of its own. In this I hope that perhaps I am on the way to bridging the gap that has always existed between painting proper and the animated film."

In 1950 McLaren produced "Around Is Around," a stereoscopic film made without a stereoscopic camera. It was an abstract film, set to the music of Louis Appelbaum, and its patterns were based on the electrical impulses found on the oscillograph tube. Staggered frames on two projectors helped McLaren achieve his astonishing results, and he exploited the ability of the animation camera and optical film printer to produce double exposures with complete accuracy to the full.

Writing in The Mini-Cinema, Neil Baron said, "McLaren's cartoons have always been free of the normal laws of movement obeyed by live films, but here the expressive dots and loops had the freedom of the auditorium; skimming towards us like quoits, bouncing over us like boulders, and lashing out like lassoos." "Around Is Around" fascinated Press and public alike. At the Telecinema during the Festival of Britain queues waited all day and every day to see it.

"Movement is still the guts of the film," says McLaren when asked his views on the cinema's future. His is essentially a visual nature. Every piece of paper that passes through his hands ends up covered in doodles. He once asked the waiter in an Ottowa restaurant to wrap up the fish bones on his plate so that he could take them home and study their own style of beauty. Even his jokes are visual; the most notorious is the enormous eye which he pastelled on the inside of a lady friend's toilet.

But even his outstanding visual talents do not occupy all his time. Not content with producing cameraless movies, he has experimented with sound until he now makes his own sound-tracks (even stereophonic sound-tracks) without microphone, recording gear, commentary effects or musical instruments. The track which accompanies his pixilated production "Neighbours" (described in the November issue) is an example.

"EMMY"

(Continued from Page 209)

awarded for photographic achievement climaxes an illustrious career for this New York-born director of photography who came to Hollywood in 1926. He started at RKO studio as an assistant cameraman, went into the armed services in 1942, and was a Captain in the Signal Corps in India. Shorr became a first cameraman two years ago when he was assigned to direct the photography of the Ray Bolger television films. He was subsequently engaged to photograph the "Medic" TV film series at its inception, and continues as the director of photography of the show, which is filmed in Hollywood at the American National Studios.

In addition to Lester Shorr, five other cinematographers were nominated for Best Director of Photography "Emmys." They are:

Norbert Brodine, A.S.C., for "The Clara Schuman Story," in the "Loretta Young Show" series.

George T. Clemens, A.S.C., for "The

Roman and the Renegade," in the "Schlitz Playhouse" series.

Edward Colman, A.S.C., for "The Big Bible," in the "Dragnet" series.

Harold E. Stine, A.S.C., for "Night Call," in the "Cavalcade of America" series.

Walter Strenge, A.S.C., for the "My Little Margie" series.

Harold Stine was chairman of the Committee on film photography awards. With more and more cinematographers joining the television Academy, it is estimated that when time for the Awards rolls around again next year, their representation in the ATAS will be substantial.

PROBLEM IN LIGHTING

(Continued from Page 223)

settings and operations photographed. For long shots of the assembly lines invariably all six Brutes were put into service to supply illumination. These big lamps have the ability to reach great distances with a powerful beam of light.

For shooting detailed operations in closeup, such as the stamping of small metal parts, two of the big "170" arcs were generally used.

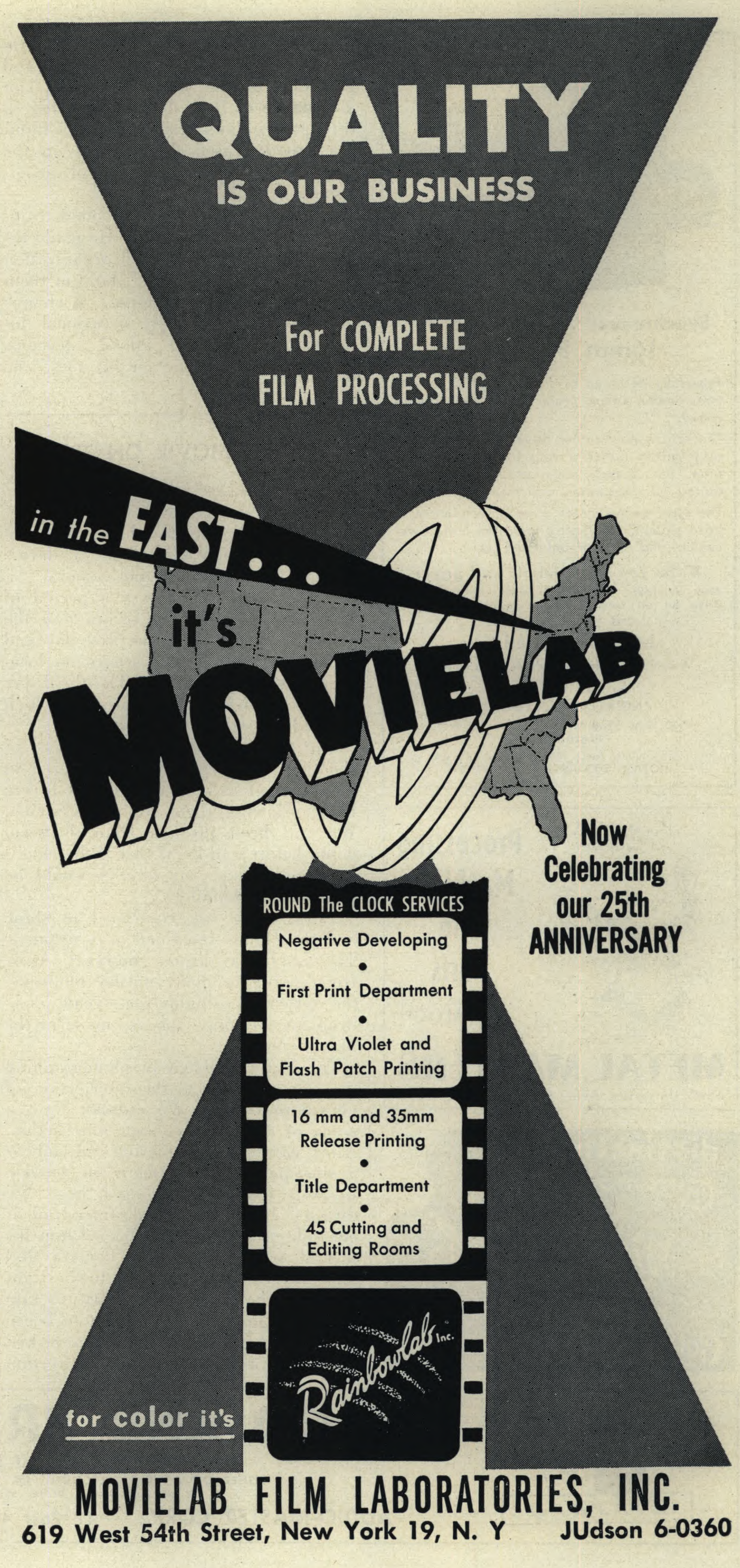
Only when shooting in the spray booth was the use of arcs restricted for safety reasons. Here incandescent lamps, such as Seniors, Cinelites and Colortrans, were used.

The entire production was filmed with the Mitchell "16" mounted on a tripod; there were no moving camera shots. This lightweight combination enabled Strenge to move in close to bulky machinery, shoot from a high parallel, and generally move from one setup to another with a minimum of delay.

The only mobile pieces of equipment were the two generators. Both were mounted on dollies and often operated from inside the factory, when maximum use of available cable was required.

Strenge's camera caught Westinghouse technicians at work in the testing laboratory, where all materials used in refrigerator construction are evaluated. It focused on the skilled punch press operators, the rack welders, and on the giant electric welding machines which automatically weld a refrigerator top, bottom, sides and back in one operation to form a complete food compartment.

From high and low angles, in long, medium and closeup shots, the camera recorded the complete fabrication of hundreds of modern Westinghouse refrigerators in mass production. Every location posed its individual lighting problem. Some operations were carried on where only a concentrated beam of light was focused on the part being



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manufactured. In other stages of production, such as the final cleaning and polishing of the finished product, an abundance of both daylight filtering in through windows and the factory lighting greatly eased the demand on the studio lighting equipment and generators.

Walter Strenge is no newcomer to industrial film photography. He made his debut in the Roland Reed organization shooting industrial films Many of them have been for Westinghouse. "A change of pace, such as these occasional industrial assignments afford, develops versatility, keeps one on his toes," he says.

OUR MOVIE ON TV

(Continued from Page 227)

ren. They took over the duties of coaching Jaime, which allowed me to devote most of my attention to my camera.

Shooting extended over a period of three days. We obtained scenes from the more distant areas on the first day and on the second we shot scenes on locations near Jaime's home. The third day was reserved for additional shots which we had missed the first two days.

On the second and third days of shooting large rain clouds gathered to the south of us and an ominous breeze began blowing them in our direction. We had been through tropical downpours before and knew that if the clouds should open up, our filming would be postponed indefinitely.

Luckily the sun continued to shine and the clouds remained at a distance. They served a purpose, however. Aside from giving us many uneasy moments, they provided a highly photogenic backdrop for the long shots we made of the Mayan temples.

Our main problem in photographing the static ruins was the interjection of logical movement. We did not want a scene of a temple without some action. After carefully considering the taboos against panning the camera, we decided we were justified in doing it here. We directed Jaime to walk down a trail at one side of a temple. I followed him for several seconds with the camera and then panned several degrees to the right to bring the large stone structure into full view. Just as I was about to begin the short pan, our little Indian picked up a stone and threw it in the direction of the temple. This natural movement proved helpful in making the transition. The pan served a two-fold purpose. First, it gave the desired action and, second, it served as a dramatic introduction to the ruins. The scene thus created of a small boy walking with complete unconcern toward a huge stone structure was impressive.

After this one orientation shot, we cut to medium and closeup scenes in the roofless temple itself, concentrating on Jaime's actions and using the building only as a background.

In the temple as in other locations Jaime showed his highly imaginative mind. In one scene we intended having him walk up to a stone figure and touch it with his hand. He did as we directed, but in addition he rubbed noses with the sculpture, providing another humorous bit of action.

In each sequence our aim was not to picture the Mayan ruins or the jungle as the dominant subject. Our major objective was the capturing of Jaime's life in these unusual surroundings. Thus, a carved stone column in our interpretation was not an object of the Mayan civilization, but merely a convenient pillar for the child to play around.

I photographed our scenes and sequences as closely as possible in the order we wished them to appear in the finished film. This method of shooting was designed to save time in the cutting room.

For shooting most scenes the tripod was used, but in several sequences the camera was hand held. This was true in the scenes with the burros, where it was necessary to shoot rapidly from different setups and where using a tripod would have been a hindrance rather than a help.

The daylight in Yucatan is surprisingly brilliant. Often I shot with the lens stopped down to almost f/11, using a shutter speed of 1/50 of a second as a basis for my meter calculations.

Through careful planning and budgeting of our film supply, we managed to shoot all scenes in our script plus the additional sequences which occurred unexpectedly, before we ran out of film. Few retakes had been necessary. All that remained now was to ship the film to the processing laboratory in the United States.

Back in my Santa Clara, California, home two months later I began the rough cutting of the picture. From the

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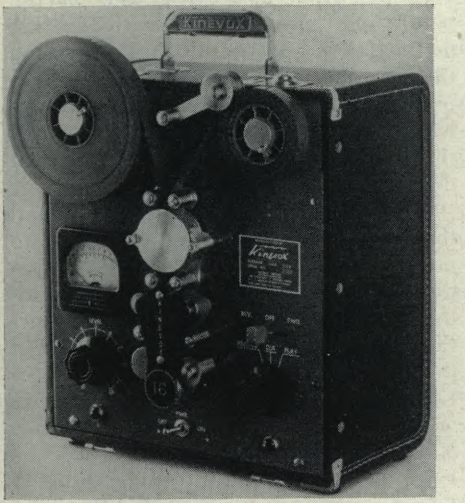

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five hundred feet of film, I got approximately eight minutes of projectionable material. I rearranged sequences to space out the peaks of interest and to give the film balance.

I took this eight minute reel of film to my friend Peter Abenheim, who is known to San Francisco Bay area moppets as television's Captain Fortune. Pete liked it and said he wanted to use it on his half-hour television program. He cut the film down to fiive minutes and forty-five seconds screen time and prepared background music and a narration for it. Two weeks later, Jaime, the little boy in the far off jungles of Yucatan smiled and played as thousands of youngsters in northern California watched on their home television screens.

PLEA TO CONGRESS

(Continued from Page 225)

cinematography. Artists' conceptions of the various dams were obtained from the regional Bureau of Reclamation in Salt Lake City. These were photographed on our title board with the Cine Special camera. Color slides which had been made of various areas in the basin were likewise reproduced on 16mm film in order to show the appearance of the areas in the summertime. This, briefly, is the story of the

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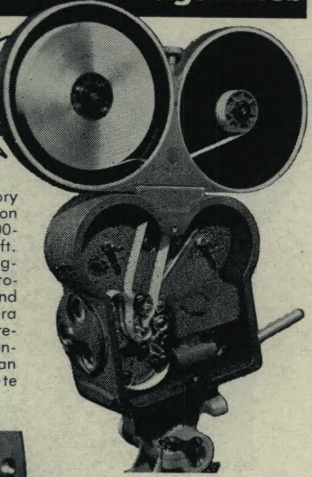

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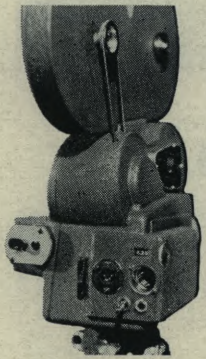

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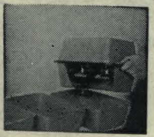

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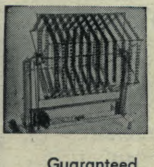

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footage shot by Forney Films for the Basin film.

In addition to our own material, we utilized films and stock shots obtained from a number of sources and integrated them with our footage in the editing of the picture. An almost unlimited source for such shots was Glenn Turner, a Utah ciné amateur of note—an amateur, incidentally, only because he likes to make movies for fun instead of money.

Meantime, tempus was fugiting, as the saying goes, and we had no sound track for the picture—usually an essential item when preparing a workprint. The answer? A "blind" sound track; we would then edit to the track.

Using seven different narrators, and intercutting the lip-sync tracks we had secured on location, a track was recorded and an optical made as a work track. This enabled our editors to get right to work in cutting the master print. In the meantime, background music and sound effects were recorded in sync with the voice track, and we had our sound track completed even before picture editing was finished.

Working far into the night, night after night, our editors put in two full 70-hour weeks on the production. A problem was keeping track of the "borrowed" footage, which had to be accounted for and returned to its owners upon completion of the editing phase of the production.

As editing progressed, the editors decided that superimposed overlays and underlays were needed in spots. So cameramen got into action promptly and filmed rushing water, and scenes of power installations, etc., for the purpose.

Finally, animation and titles were shot. The opening title description called for a live action background of a world globe suspended in mid-air and rotating slowly, with title text superimposed on it. This was accomplished by suspending a 12-inch globe on a string and placing before it a panel of glass with the title text lettered upon it. Shooting through the glass, the text and globe were effectively photographed. An added feature was the effect of clouds drifting over the earth—obtained with the aid of dry ice vapors.

In time the master was ready and the first answer print was delivered to us from the processing laboratory on the 14th day of January—right on deadline. But the story of this film production did not end here. The premier of the picture was scheduled to be held in Gallup, New Mexico, in conjunction with a tribal council meeting of the Navajo Indians and members of the Upper Colorado River Commission. A feature of this meet was to be an enactment of the Navajos going on the warpath—the first time the colorful ritual had been performed in one-hundred years. Forney Films was called upon to record this event on both 16mm and 35mm film—the latter for the Newsreels. On the site we had an Auricon-Pro, a Cine Special, two Bolex H-16's, and a 35mm Eyemo.

An interesting fact about this production, incidentally, was revealed by our accounting department when it set about figuring the billing for "pickup" footage. "Birth of a Basin" is 972 feet in length. Of this, only 218 feet was "pickup" or purchased footage; the other 754 feet had been shot either by our location crews or on our sound stage in Fort Collins, Colorado. END.

ALL-FILM TELEVISION STATION

(Continued from Page 204)

ered buying the necessary equipment and doing its own film processing. But about the same time Harold's Photography in Sioux Falls installed new, modern fast processing equipment, and it was decided to turn the work over to them. From the time we placed film in their hands, they had it ready for projection at our transmitter in 2½ hours or less. This lab has since installed even faster processing equipment which enables us now to put films on the air thirty minutes after shooting.

Before KELO-TV made its debut on the air, there was a busy period of shooting and televising film tests. We shot a number of prototype commercials of home appliances. Harold's was just installing their new processing equipment, so this footage was sent off to a lab in Chicago for processing. It was an important moment when we put these films on the air for KELO-TV's management to see. They were amazed with the quality and altogether delighted with results.

Encouraged with the success of our test films, we now decided to film a series of five-minute news and sportcast "pilot" films with typical commercials integrated. These were designed to demonstrate to prospective sponsors the station's facilities and the quality of its film work. The move was highly successful. A lot of air time was sold as a result of showing these films, and many of the original sponsors resulting from that campaign are still with us.

As we went into full time daily operation, film production, in addition to that of commercials, consisted of five shows daily, Monday through Friday. These were a 10-minute 6:45 PM newscast fol-

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lowed by a five-minute weathercast. At 10:00 PM there were three ten-minute shows, a weather show, a sports report and a newscast. The daily total of telecast footage, exclusive of commercials, was then 45 minutes. The commercials ran anywhere from 20-second spots to five-minute full commercials. Not the least important of our commercials was one for a local hardware store, which ran no less than 15 minutes every Friday night. This feature has been on KELO-TV regularly for over a year, and continues to have a large following among viewers.

Most of the news and weather shows were filmed much the same as live TV shows, except that one film camera was used on a dolly, and moved in and out.

Following the initial months of operation, KELO-TV extended its daily telecasting time. Additional "live film" shows were added to our already busy schedule. These included a farm and market show five days a week; an early sportcast; and a news and weather show (very popular here) were added on the Saturday and Sunday schedules, making a total of seven week-day shows and two each on Saturday and Sunday.

There have also been added over a period of time additional weekly and twice-weekly shows. These include two

(Continued on Page 237)

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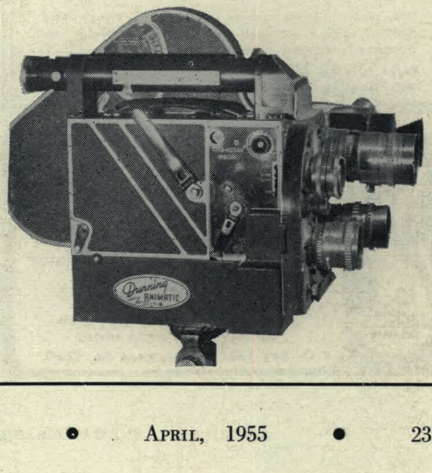

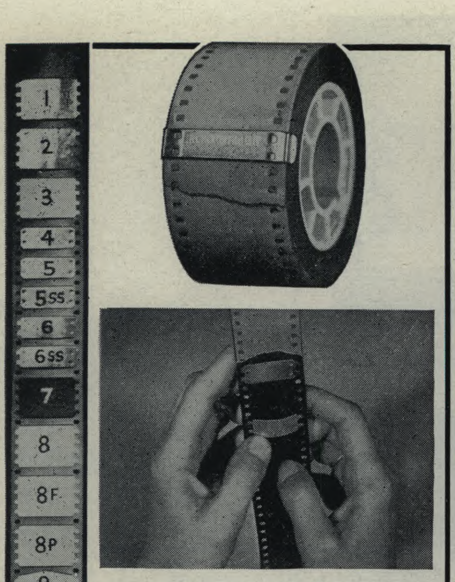

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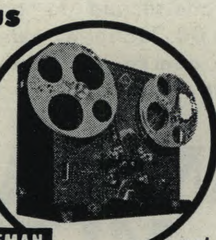

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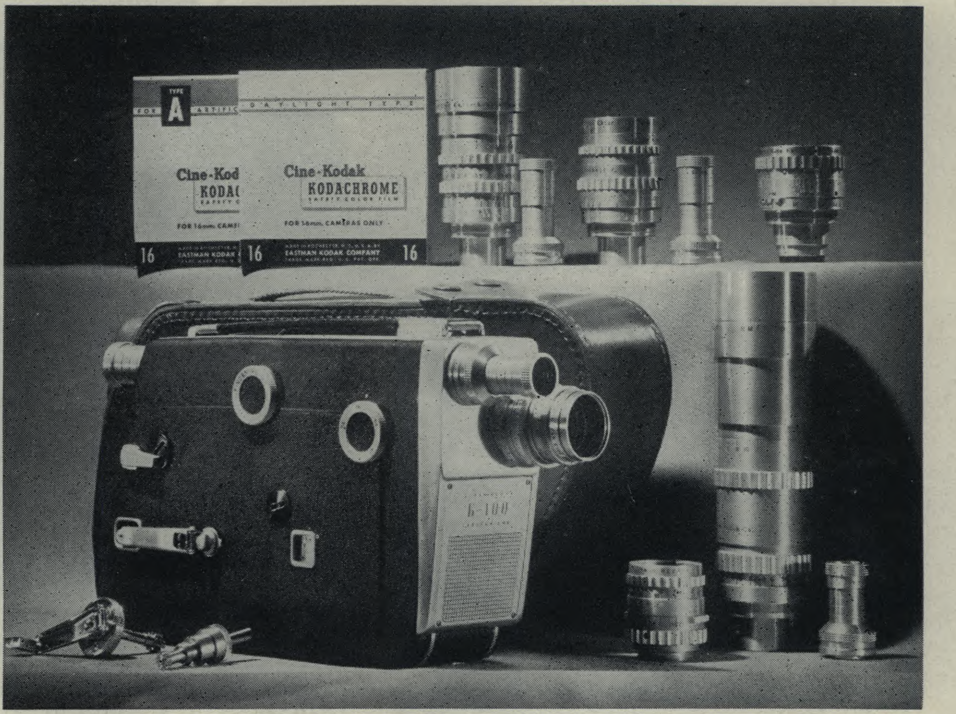

CINE-KODAK K-100, new 16mm cine camera with many new features.

A SMART new professional looking 16mm camera is introduced this month by Eastman Kodak Company. In addition to its advanced styling, it is highly professional in function and in its many special features which long have been desired by both the serious and the semi-professional 16mm cameraman unable to afford the more expensive cine cameras.

The new single-lens Cine-Kodak K100 features a pre-stressed spring-power motor that exposes up to 40 feet of film at a single winding, a shutter release at the *rear* of the camera, a full size one-for-one telescopic viewfinder, and a large, accurate speed-control governor.

It is particularly well adapted to the needs of movie makers who want a high-quality 16mm outfit at a lower price than the professional type 16mm cameras currently available.

Latest in the series which began in 1930 when Eastman introduced the Cine-Kodak Model K, the new K-100 may be had with either the Ektar 25mm f/1.9 or the Etkar 25mm f/1.5 lenses. In either case it will use any of a full complement of auxiliary Kodak Cine Etkar lenses in focal lengths from 15mm (wide-angle) to 152mm (6 times magnifying telephoto).

The K-100 loads with 50- or 100-foot rolls of all standard Kodak movie films, either single perforated (for either optical or magnetic sound) or double-perforated. Besides the usual film-footage indicator, it has a newly-developed spring-motor dial to show at any time how many feet of film *can be run without rewinding.*

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The viewfinder on the K-100 is of the telescopic type with a built-in eye adjustment control to combine the sharpness and brightness of an optical finder with the full-view advantage of a sports type finder. Picture area and parallax correction are clearly indicated. Quickly interchangeable finders are offered for all of the auxiliary lenses.

An auxiliary hand crank makes it possible to backwind in producing multiple exposures and other special cinematic effects or to vary exposure for adverse lighting conditions. The camera may also be run by an electric motor drive shaft.

Kodak combination lens attachments available include filters for both color and black-and-white, Portra Lenses, Pola-Screens, and lens hoods. A carry case is offered for use with the camera—a drop-front Kodak field case designed for fast action.

List prices, including federal taxes, are $269 for the K-100 with f/1.9 Etkar lens and $369 with f/1.4 lens. Write Eastman Kodak Company, Department 8-V, Rochester 4, New York, if you'd like a descriptive pamphlet on the camera.

ALL-FILM TV STATION

(Continued from Page 235)

15-minute shows featuring women's fashions, complete with models, interviews, local interest and cooking tips. More recently we have added another popular feature—a once-a-week appearance of the local dog catcher offering dogs and cats for placement in homes!

A 15-minute sewing and a 15-minute cooking show, both sponsored, ran for several months. Still another was a show on interior decorating; this was photographed in a different home in Sioux Falls each week. There also was a special sports show in which the local high school coach gave a talk augmented by blackboard illustrations.

In our present programming are weekly films of Chamber of Commerce discussions which often feature officials voicing their views on city planning and other local problems; also three 15-minute religious programs, each sponsored by individual churches or denominations.

In all, we are now on the air with film material originating locally an average of 12 hours per week. A great deal of this is time-consuming take-by-take production, and some if it is shot on locations involving difficult shooting problems. We have probably set up our camera and recording equipment in most of

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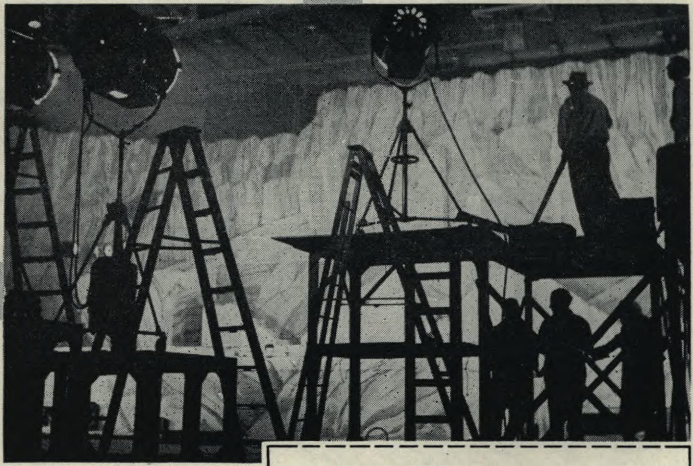

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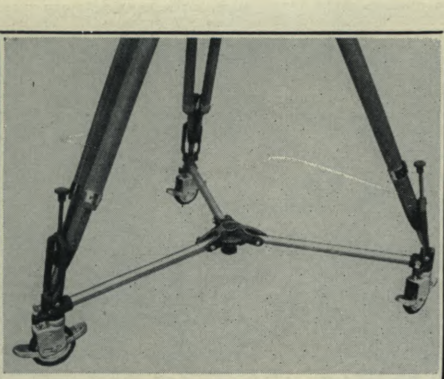

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SUITING LENS TO SCENE

(Continued from Page 213)

phy, not only because it is the most widely used lens for average scenes, but because it is considered to have a normal perspective. In other words, it "sees" the various elements of the scene in a size and space relationship very much the way the human eye would see them.

Unlike the wide-angle or telephoto lenses, which have their special uses but which by their very optical characteristics give an exaggerated view of the subject, the standard lens does not distort perspective. It can therefore be used for high or low angles, for scenes involving panning or tilting, and in all sequences where a straightforward approach is desired.

The 1-inch lens is usually standard equipment on cine-cameras which are sold with only one lens. It has sufficient depth of field to insure sharpness under all ordinary conditions, even when the lens is not too critically focused, and it is the most versatile general-purpose lens to use for a large percentage of scenes to be filmed.

The Wide-angle Lens: Lenses having focal lengths somewhat shorter than 1-inch are lumped in the general category of wide-angle lenses. As has been pointed out, the 15mm lens is the one most generally used for wide-angle effects, although the 20mm is quite popular in professional filming. There is also on the market a lens only 9mm in focal length which gives an extreme wide angle of coverage. Although useful in very special situations, its inherent distortion places it in the "gimmick" class as far as most serious cameramen are concerned.

The wide-angle lens, correctly used, can produce very dramatic effects, aside from solving several important technical problems. One of its greatest functional uses is to cover as much as possible of a subject when it is impossible to move back far enough to get the desired angle of coverage with a standard lens. It is therefore very useful in cramped quarters when shooting interiors, or in exterior locations where buildings or other obstacles make it difficult to move back far enough to get a long shot.

Dramatically speaking, the wide-angle lens makes possible a broad variety of effects, not the least spectacular of which is the split focus shot. This is a type of composition in which, for example, a woman's face may fill half of the screen while a large building in the background dominates the other half of the frame. Even though one subject is only 15 inches from the camera and the other is at infinity, *both are in acceptable focus.*

This effect is made possible by the fact that the optics of wide-angle lenses result in a great depth of field. By way of illustration: the hyperfocal distance of a 15mm lens stopped down to f/16 is 2 feet—which means that when the focus scale is set at 2 feet, everything from 1 foot to infinity will be in focus.

While the split-focus shot is an extreme technique and therefore not to be used indiscriminately, the great depth of field of the wide-angle lens permits an interesting use of foreground objects to frame a scene. This lends greater depth to the composition, helps to establish the spacial relationship of various objects or people in the scene and creates interesting lines of composition. Its effects on the viewer is to bring him more intimately into the scene, so that he feels a part of it.

The forced perspective of the wide-angle lens results in a foreshortening effect that can be either a photographic asset or liability, depending upon how it is used. Simply explained, it means

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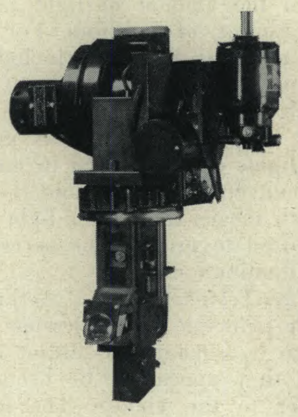

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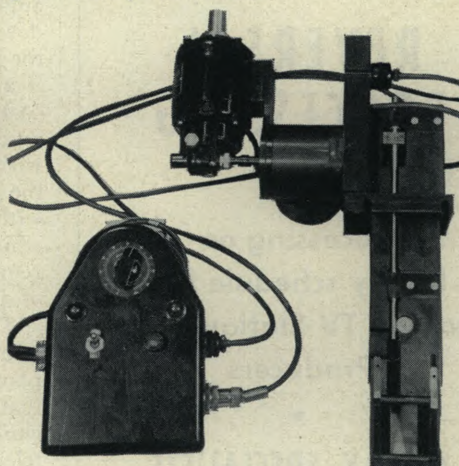

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that whatever is closest to the lens is exaggerated in size out of all proportion to that in the same scene which is farther from the lens. A subjective shot in which a character throws a punch at the lens in such a way that the fist looms seemingly out of nowhere to fill the frame, can be very effective. On the other hand, a wide-angle closeup of a pretty girl would become grotesque because the nose (being the part closest to the lens) would appear very large in relation to the other features. For this reason a wide-angle lens should never be used for filming closeups, unless a comic effect is deliberately sought.

The forced perspective of the wide-angle lens also applies to separate elements within the scene, making them seem farther apart than they really are. Thus, a distance of 5 feet between two people located in separate planes straight out in front of the lens will actually appear more like 10 feet. Similarly, a person can move from a long shot to a closeup with fewer steps and in much shorter time than if the scene were filmed with a longer lens. This allows for a tightening up of distance in plotting movement and a much brisker pace of action.

The combination of a wide-angle lens and a low vantage point causes people and objects to tower into the scene, thus accentuating their power as dra-

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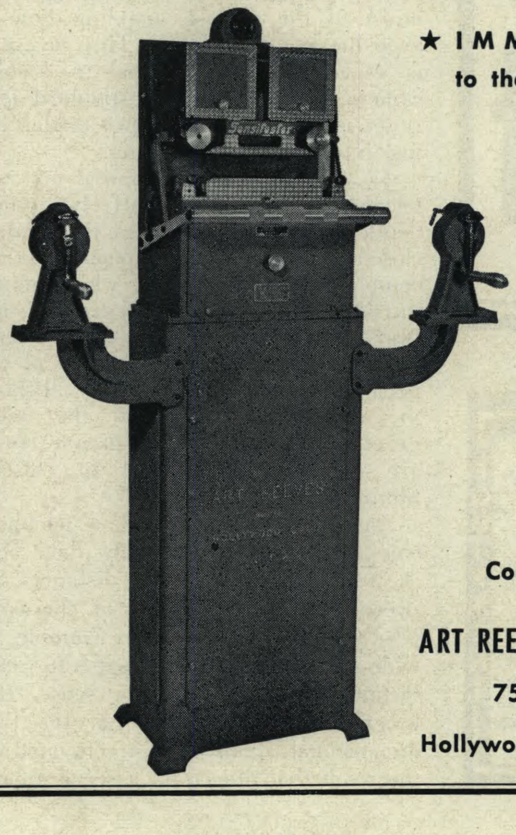

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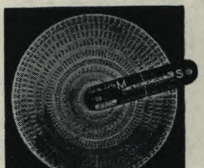

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matic elements. Such angles also have an "unreal" quality that adds to the illusion of dream or fantasy sequences. Because there is invariably some linear distorition at the edge of a scene photographed with a wide-angle lens, one should avoid panning with such a lens, especially on small sets.

From the practical standpoint a wide-angle lens can be very helpful in cutting down the amount of light needed for the filming of interiors. For example, if a given area is to be included in the composition, it is possible to move in much closer with a wide-angle lens than with a standard lens. This means that the lights can be moved in much closer without encroachment into the frame—which means that fewer light units are required to provide the necessary level of illumination.

The Telephoto Lens: Acting on the same principle as a telescope, the telephoto lens magnifies distant objects so that they appear to be brought much closer to the viewer. The longer the telephoto the greater the degree of magnification of the subject in the frame.

This characteristic proves valuable in getting close shots of birds and animals which might be frightened away if the camera were set up closer to them. It is equally useful in photographing people who have never been in front of a camera before and who might become quite self-conscious were the equipment set up closer to them. In shooting "candid" types of scenes for documentaries, for example, a telephoto is indispensable.

When shooting sports films, a telephoto can put the viewer right in the midst of the contest, enabling him to keep his eye on the ball. This coverage is especially efficient when a second camera equipped with a standard lens is set up alongside—the two angles being intercut during editing.

As we have already pointed out, the telephoto lens has a relatively limited depth of field. This makes it an ideal closeup lens for shooting people against complicated backgrounds, which might intrude should those backgrounds appear too sharp. The telephoto lens, focused sharply on the features of the person in closeup, effectively diffuses the distracting details of the background. The 2-inch and 63mm lenses are especially well-suited to closeup filming.

Another characteristic of a telephoto lens is that it is relatively flat. That is, it tends to shorten the distances between the various planes of the composition, (as opposed, for example, to wide-angle lenses that exaggerate such distances.) In a negative sense, this inherent flatness means that the two-dimensional quality is accentuated to the point that objects in a scene appear as if painted on a flat surface. To minimize this effect it is advisable to shoot such scenes with cross-light to produce added depth and modeling whenever possible.

However, this same characteristic of flatness has a practical value in scenes where it is dramatically desirable to bring two objects in separate planes closer together or make them seem more equal in size.

Telephoto lenses are frequently used in exterior filming to get closer shots of very distant objects or scenery. In making such long distance shots, often a great concentration of ultra-violet haze in the atmosphere will be encountered which, while invisible to the eye, will register prominently on the film. Because this pile-up of ultra-violet light will give the scene an overall cloudy or muddy aspect, it is advisable to use a deep yellow filter with panchromatic emulsions and a colorless haze filter with color film.

Another word of caution is timely here in regard to the use of telephoto lenses. Remembering that the longer the lens the more exaggerated the movement (jiggling, shaking, panning, etc.) of the lens, one should avoid panning or tilting with a telephoto unless it is absolutely necessary. Panning or tilting should be done only to follow moving objects. Moreover, such camera movement must be done much more slowly and with a greater degree of smoothness than if a shorter lens were used. In short, sloppy camera handling will show up with glaring effect when longer lenses are used.

A combination of standard, wide-angle and telephoto lenses will see the average 16mm cameraman through any type of photographic situation he may encounter. When these lenses are mounted on a turret it is a simple matter to change readily to the other, making the most of the visual effects available, and suiting the lens to the scene for maximum professional results.

CINE CAMERA TRICKS

(Continued from Page 226)

cover the space between camera and title card frame with black cloth, making sure of course that cloth is held taut and not allowed to droop into camera range.

In a comedy or fantasy, it is often an effective touch to have a character disappear right in the middle of a scene. This trick is accomplished by stopping the camera in the midst of the action, allowing the actor to step out of the composition, and then starting the camera again. (An example of this sort of trick may be seen in the popular "Topper" television series.)

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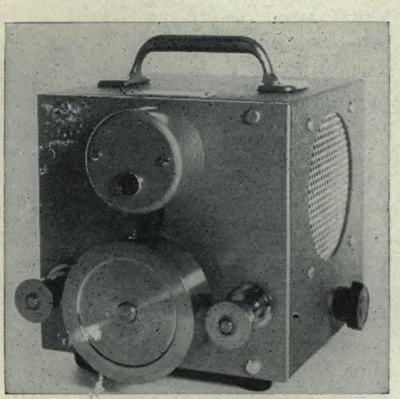

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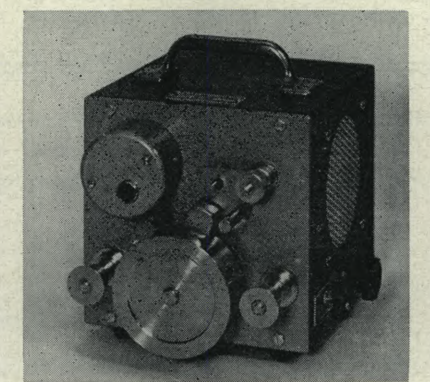

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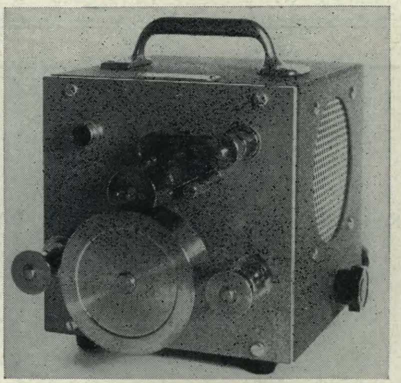

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Take, for example, a sequence in which a magician is to make his assistant disappear. The camera is started with normal action taking place; the instant the magician waves his wand, camera is stopped and the assistant steps out of the scene—the magician meantime "freezes" or holds his pose until the camera is started again. As shooting resumes, the magician continues his action.

This technique can also be used to make objects disappear one-by-one from a scene. One could imply the passage of time by filming a dinner and showing the various courses disappearing one-by-one. The routine may be reversed also, to make things suddenly appear in a scene. For this type of filming, it is essential that the camera be securely mounted on a rigid tripod, and that the tripod head, if one is used, is securely locked in place so that the camera will not be moved even the slightest between the "stops and starts." Should it move, it will greatly detract from the effect of the trick on the screen.

Many effective tricks can be created if your camera provides for a range of speeds, in addition to the standard 16 f.p.s. Bearing in mind that the faster the camera speed the slower the action on the screen. and the slower the camera speed the faster the screen action, you

(Continued on Next Page)

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Virgil Miller, "You Bet Your Life."

Hal Mohr, "Life With Father."

Nick Musuraca, "Lineup."

Kenneth Peach, "Steve Donovan, Western Marshal," "Gangbusters."

Robert Pittack, "The Lone Ranger," and "Private Secretary."

Mack Stengler, "Liberace Show," "Florian Zabach Show," and "It's Fun To Reduce."

Harold Stine, "Superman," and "Korla Pandit show."

Alan Stensvold, "Andy's Gang."

Walter Strenge, "Waterfront," "My Little Margie."

Philip Tannura, "The Burns and Allen Show," and "The Jack Benny Show."

Stuart Thompson, "The Whistler."

Lester White, "Judge Roy Bean."

Harry Wild, "Bob Cummings Show."

CINE CAMERA TRICKS

(Continued from Page 241)

can suit the speed of film travel to your respective needs.

Slow motion is especially effective when used to show details of action which is normally rather fast. For this reason, it is frequently used in filming sports events. Walt Disney's wildlife cameramen often employ it to gain an interesting or comic study of certain action of animals or fowl. Industrial filmers use it also to obtain slow-motion studies of mechanical operations or product performance.

Standard sound speed of 24 f.p.s. shows little difference over 16 f.p.s. when screened at the latter speed; but film shot at 48, 64 or 128 f.p.s. will produce highly interesting slow-motion action.

In home movie comedies, slow motion can be used to heighten the comic action of a drunk, or to picture a scene in motion as it appears to him. It is also effectively applied to dream sequences where it is necessary to exaggerate action or motion in order to convey the desired element of fantasy.

A more utilitarian use of slow motion is to smooth out the roughness in scenes resulting when they are filmed from an automobile or plane. Keep in mind, however, that any action taking place in the scene as it is filmed will also be slowed down—possibly to a ridiculous degree. Obviously slow motion should be restricted to scenes of this type which are in themselves reasonably static.

Fast motion is, of course, the direct opposite of slow motion, and is produced by filming at 8, 12, or 16 f.p.s. (the latter when the rest of the subject film is being shot at sound speed). Fast motion can also be used to achieve certain comedy effects. To burlesque the hustle and bustle of a New York subway, for example, fast motion filming (at reduced camera speed) will show on the screen people rushing and crowding each other in exiting and boarding the trains. A speed of 8 f.p.s. is best for action of this type.

A more practical application of fast motion, however, is in the speeding up of chase sequences—speed of movement which cannot safely be filmed at a maximum rate of movement. A scene of a car going around a mountain curve is a hair-raising spectacle on the screen when shot at 8 or 12 f.p.s. The old Keystone comedy cameramen were experts at this.

Fast motion can also be used to obtain a spectacular effect of clouds scurrying across the sky.

Single-frame photography is an extension of fast motion photography. It can provide a multitude of special and trick effects. Best results follow where the camera provides for single-frame exposure, with each exposure uniform in timing. It is possible to achieve a measure of stop-motion or single-frame filming with cameras that do not have the single-frame exposure device. This is done by allowing the camera to run down before starting the single-frame exposures, then flicking the starting button lightly to effect a single exposure; sometimes. however, tapping the button thus will send two or more frames of film past the gate, and this, of course, upsets the pattern of action.

The most satisfactory results from the use of the foregoing trick filming procedures will follow where the desired camera tricks are carefully plotted in advance and made an integral part of the shooting script. Their success will depend upon how appropriate they are to the situation or action, as well as upon how smoothly they are executed.

SHOOTING "OKLAHOMA!"

(Continued from Page 211)

early, and the various scenes were enacted and shot twice—once with the Todd-AO camera and once with the CinemaScope camera. At first this seems an incredibly costly procedure; actually it was not, when one considers the pictorial gains that were thus achieved.

One of the major differences in shooting Todd-AO as compared to conventional cinematography is that the former is photographed at 30 frames per second instead of 24. This is necessary to avoid flicker in the super wide-screen area of the Todd-AO frame when projection takes place.

"About the only time we altered our camera speed," Surtees said, "was when we wanted to give the aspect of faster speed in chase scenes involving horses and riders. In such instances, we shot the action at 25 fps. This brings up the matter of cross-screen action — which presents another taboo when shooting with Todd-AO. It isn't possible to get smooth, blur-free images where fast action moves directly across the ultra-wide Todd-AO screen. Therefore action of this type was staged diagonally across the screen, coming straight toward the camera, or in and out directly, as best suited the action.

"Another major difference in shooting technique demanded by the Todd-AO system is in the matter of camera cuts. Here a great deal of thought must be given by the cameraman to cutting, rather than leave it entirely to the editor later. If this is not done, objectional visual 'jolts' are very likely to occur in the picture. Let me illustrate:

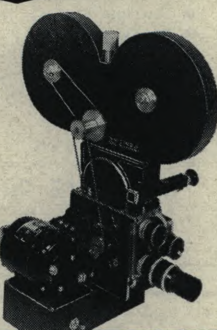
"Take a scene in which we are to bring an actor into a house from out of doors. In the exterior shot, we shoot him in medium closeup—from the waist up. When we pick him up again on the interior shot, showing him entering the house, we maintain the same compositional proportions and frame him in a similar manner from the waist up. Here also the camera is kept at the same distance for both shots.

"Perhaps the greatest difference between Todd-AO photography and that done with, say, a Mitchell or Vista-Vision camera, is in the matter of lenses. Lenses used on the latter cameras, as with all conventional motion picture cameras, are classified according to focal length. With the Todd-AO system, the lenses are classified according to their angle of coverage. In addition to the large 'bugeye' lens, with its 128-degree angle of coverage, there are three additional lenses covering angles of 64-, 48-, and 37-degrees respectively. As with Mitchell cameras, we are able to line up our shots directly through the taking lens, and are able to see exactly what area of the scene the lens takes in.

"The combination of the wide angle of coverage of Todd-AO lenses combined with the great screen area produces high magnification on the screen. As a result, Todd-AO pictures are clearer and sharper. This immediately posed problems in makeup and set design. In the latter, the painting of sets to give the appearance of great age had to be done with meticuolous care, otherwise the illusion would be too apparent. In the matter of makeup, this, too, required more meticulous application than is generally accorded players in conventional motion picture photography. Wigs, beards and mustaches had to be finely constructed and authentic in detail to avoid that 'fake' appearance we so often see on the screen."

The artistry of Surtees photography is evident from the opening scene of the film, in which the camera follows the main character through a corn field as the song, "O, What a Beautiful Morning" is being sung. The corn, which is "as high as an elephant's eye" parts before the camera and seems to wrap around the viewer, creating a most effective visual pattern.

In a later sequence the camera is mounted between the wheels of a horse-drawn carriage to show how chickens, pigs and other barnyard tenants scurry out of the way when the "Surrey With the Fringe on Top" comes rolling through. But the pictorial high point of the picture is the dream ballet in which an allegorical story involving the protagonists and the villian is portrayed in dance patterns. Since an optical printer for the process had not yet been built when this sequence was shot, it was necessary to plan transitions in and out of the "dream" atmosphere through the use of cuts rather than conventional



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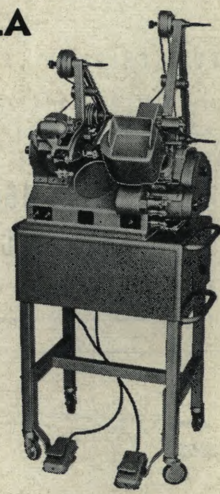
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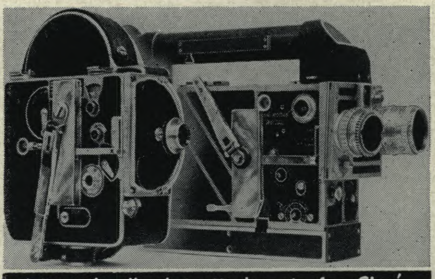
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dissolves. Fades and dissolve effects were created through the special use of light.

The lighting key of this sequence starts high, with the set bathed in gold light. As the action progresses and becomes more dramatic the tones become colder, changing to shades of blue and green. Through it all the heroine, clothed in a white dress, moves in her own pool of golden light. The villian, on the other hand, moves in a pool of green light that lends a sinister quality to his features.

The entire production was shot with arc rather than incandescent lighting. This was necessary because of the extremely long throws required to illuminate the huge sets, plus the fact that a light level of 1,000 foot-candles was needed to make possible the stopping down of the lens to an average f/3.2 for added depth of field. Over the arcs Surtees used a No. 53 straw-colored filter to warm up the tones. He pointed out that arcs were actually more economical than incandescent lights would have been on such large sets and that the resulting single light source quality of the lighting was much more akin to the actual sunlight which it was supposed to simulate.

Holding color tones consistent during the changing light conditions of exterior shooting was difficult, especially when studio-shot scenes done on the stage had to be cut into these sequences. Yellows, greens and reds were problem colors. When informed of this, director Fred Zinneman asked: "What colors are left that we *can* shoot?" Strangely enough, Surtees found that he could get more consistant color rendition by having exterior sets painted with the type of flourescent paint used for "black light" effects.

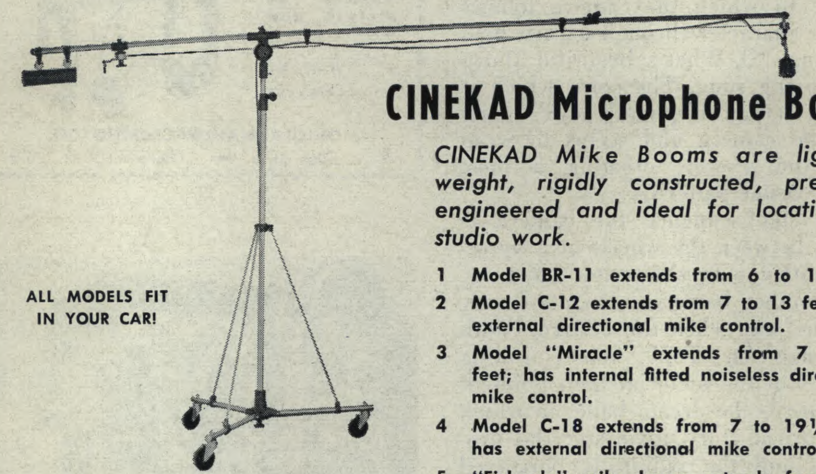
The camerawork in "Oklahoma" is spectacular by its very understatement. Its overall style was inspired by the paintings of Peter Hurd, whose simple clean treatment of Western and rural themes has produced a "modern" result with an impact all its own.

Using Hurd's painting as a starting point, Surtees further stylized his compositions by using set elements such as windmills, fences, barns, etc., built in forced perspective. Everything possible was done to give the compositions depth and dimension, to avoid the "painted backdrop" look of flatness which is so often characteristic of outdoor epics.

In shooting "Oklahoma!" Surtees said he endeavored to use a fresh and original camera approach for each situation. "That's why whenever we found ourselves about to consider a technique that had been used before, we would toss it out and search for something new and original instead," he said.

"It is a little difficult for me to put into words how it felt to work with something as totally new as Todd-AO," Surtees concluded. "We started shooting before we even knew whether it was going to work. We had no precedents to go by, not even any technical data to refer to. Every bit of camera, lab, editing and projection equipment had to be specially designed and built as we went along—often on feverish deadlines just ahead of our shooting schedule. We felt like real pioneers—but there was a spirit there, a spark of excitement generated throughout a wonderfully loyal and competent crew working together to produce something very special. It was an experience I'll never forget."

NOTE: For technical details of the Todd-AO camera and equipment, see "Todd-AO—Newest Wide-screen System" in October, 1954, American Cinematographer, page 494.—EDITOR.



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ACADEMY AWARDS

(Continued from Page 208)

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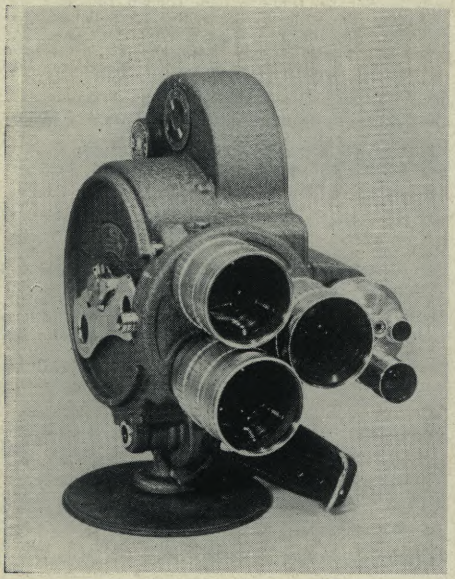
Bell & Howell Announces New 16mm Lenses



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For home movies it permits the filming of family events with an entire room as the stage. This is especially effective for large groups or, for example, at Christmas when the room is attractively decorated for the occasion.

The new one inch f/0.95 lens combines unsurpassed speed with sharp definition and contrast never before achieved in a truly fast lens. Its ingenious 8-element design was developed after years of research on the performance characteristics of high speed lenses. It is fully color corrected, an outstanding achievement in a lens of its speed.

This speed virtually eliminates the necessity for extra lighting except for special effects. Fully exposed color movies may be taken in any well-lighted room. With the new high speed black and white films it makes possible shots heretofore considered "unfilmable."

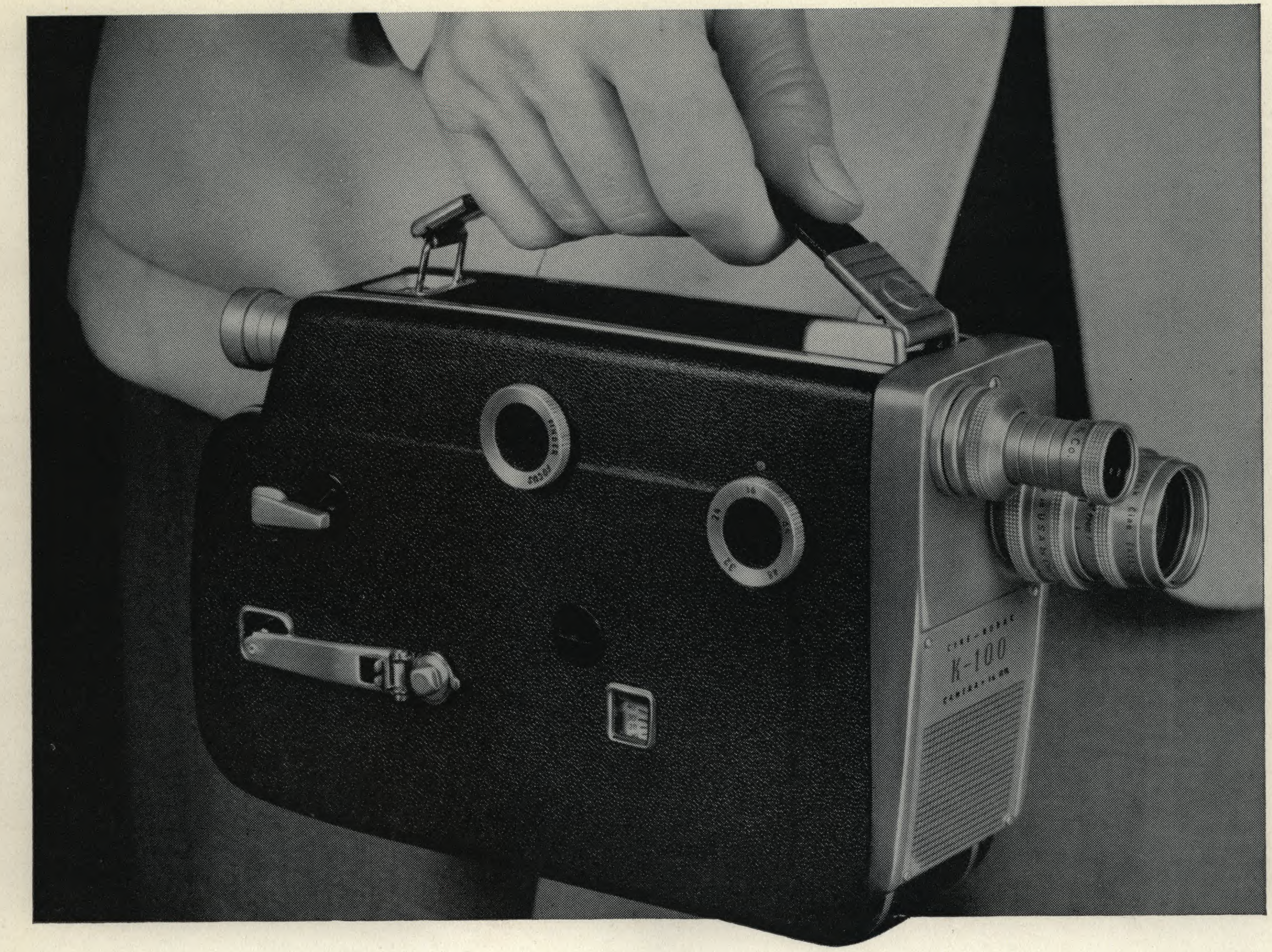
The lens will be especially valuable to television, newsreel and industrial cameramen where only normal room lighting is available, such as in some courtrooms, at indoor athletic events, and in some industrial plants. It is ideal for amateur movies indoors and for travel and vacation filming under adverse lighting conditions.

The two new lenses, together with the Bell & Howell-Angenieux three inch f/2.5 telephoto lens announced in December, provide the most versatile, fastest combination of lenses in the world today. All three may be mounted on the Bell & Howell 70-DL or 200-TA Auto Master cameras without physical or optical interferences of any kind, giving a 7½ to 1 (75mm to 10mm) range of focal lengths.

The lenses may be mounted on any 16mm camera having a standard C-mount.

The one-inch lens with stops from f/0.95 to f22 and a focusing mount retails at $209.50. It takes a size 5.5 filter.

The 10mm f/1.8 wide angle lens, a 6-element inverted telephoto with fixed focus and a range of f/1.8 to f/16, retails at $124.50. Special slip-on filters are now available.



The man with the new K-100

Keep your eye on him, the man with the new 16mm. Cine-Kodak K-100 Camera. Because here's a man who really knows his movies. Wherever you see him, you know important things are going on.

Perhaps he's a commercial photographer or a television program man. Perhaps he's an advanced amateur really serious about fine movies. Watch him work—there are big ideas in his script. And he's getting them.

The man with the Cine-Kodak K-100 Camera is a man who must have the unsurpassed quality of Ektar Lenses. For his long scenes, he needs a forty-foot film pull from one winding. He has to have a finder that combines the advantages of optical and sports-type finders. He may even be using sound film.

Above all, he's a man who must have the K-100's convenient versatility for dissolves, slow-motion scenes, multiple exposures, and other advanced technical effects.

That's why he has a K-100. If you're also interested in high precision and versatility in a moderate-priced 16mm. camera, you should probably have one, too. See it at your Kodak dealer's.

Most Kodak dealers offer convenient terms. Prices include Federal Tax and are subject to change without notice.

Specifications: Takes 50- or 100-foot, single- or double-perforated 16mm. film. 165° shutter. 1/35-second exposure at 16 frames per second; 1/20 at single frame. Provision for hand crank or electric-motor drive. Hand crank permits back winding film up to 2 feet. 16 to 64 frames per second. Finger-tip release provides for single frames; locks for continuous running. Pre-stressed spring motor. Meters indicate footage remaining on roll and on wind. Telescopic-type finder corrected for parallax. Indoor-outdoor exposure guide. Nylon gearing. Body of die-cast aluminum with black Kodadur covering. Size, 8⅞ x 5¾ x 2½ inches. Price, with Kodak Cine Ektar II 25mm. *f*/1.9 Lens, $269; with Ektar *f*/1.4 Lens, $369.

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